YUKON
HEALTH STATUS
REPORT

2009

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Foreword

Since the publication of the 2003 Yukon *Health Status Report*, the health of Yukoners has changed in a number of important ways—some predictable, and some unexpected. In the last six years, we have seen an alarming rise in the rates of smoking, obesity and diabetes. Injuries, chronic diseases such as heart disease and stroke, cancer, and the effects of substance abuse continue to take a toll on Yukoners year after year. But as the overall population of the territory has grown and the average age has risen, we have also seen life expectancy increase slightly.

At the time of finalizing this report, Yukon had made its first flirtations with the pandemic H1N1 virus. The ultimate impact that this influenza will have on Yukon and Yukoners remains to be seen, but preparations for all contingencies are still being refined and updated as new information flows in. Whatever the impact of H1N1, a sophisticated pandemic plan and emergency response system has become a key priority of public health. In our world, viruses travel almost as quickly as information, and we are obliged to stay ahead of the game.

This report presents a picture of the current state of health and wellness among Yukoners, focusing not only on disease outcomes, but also personal health practices, determinants of health and the performance of the health care system. The report is intended to be useful for and intelligible to a wide variety of audiences, including health practitioners, researchers, the media, and most importantly, the general public. As with previous Health Status reports, this report can be used in a variety of ways. It can help us learn about who we are and what we experience, and how this may differ from other parts of the country. This report can also act as a tool for planning, and can help us more appropriately and efficiently allocate our resources.

The H1N1 pandemic, while not discussed in this report, has already taught us several key lessons. Foremost among these is that measuring, understanding, and communicating to health providers and the public are essential tools of public health in tackling any problem, no matter how new or old, out of the blue, or run of the mill.

I hope that such learning can be applied to all health needs; how to use information to better the health of Yukoners. This report is another step in that direction. I sincerely hope you will find the contents to be interesting, engaging, and thought-provoking. One measure of success will be the questions, discussion, or letters that follow. I invite them all, wholeheartedly.

Brendan E. Hanley, MD CCFP(EM) MPH
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Part 1

Putting Health into Context

A. Yukon's social and demographic context

Most people from "Outside" are surprised at how few people live in Yukon, and how far fewer live in the communities outside the capital of Whitehorse. Yukon's low population density and vast distances often come up in discussions about health issues. In order to better understand health issues in Yukon, it makes sense to start with who we are as Yukoners.

1. Population profile

The 2006 Canada census identified a Yukon population count of 30,372. This was an increase of 5.9% over the 2001 census population count, similar to the 5.4% population growth seen in Canada as a whole over the 5-year period. The census reported on 12,615 private dwellings in the territory. Yukon is one of the most sparsely populated regions in Canada, with 0.1 residents per square kilometre. For comparison, the national population density is 3.5 residents per square kilometre, itself a low figure if we compare internationally.[1] For example, the United Kingdom's population density is 248, India 345 and Philippines 282 persons per square kilometre.[2]

Number of people per square kilometer (2006)

Yukon 0.1 Canada 3.5 United Kingdom 248 Philippines 282 India 345

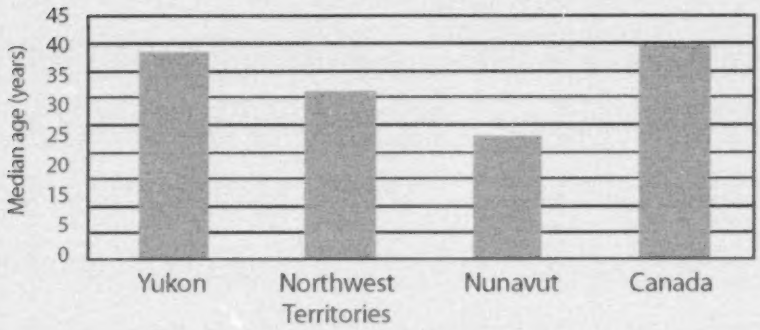
The Yukon Bureau of Statistics arrives at a population count of 32,714 as of December, 2007, based on health care registration and other administrative data. This figure is likely more accurate than the census count, as the latter inevitably misses some residents who either choose not to file a census questionnaire, or are overlooked. In 2007, the majority of the Yukon population (75%) lived in Whitehorse. 50.3% percent of Yukon residents were male and 49.7% were female.

Yukon population by sex (1996, 2001, and 2006) (in 2003 report)

	1996	2001	2006
Male	16,661	15,466	15,280
Female	15,277	14,715	15,090
Total	31,938	30,181	30,372

Data source: 2001 and 1996 data from 2003 Yukon Health Status Report (originally Statistics Canada, Census 2001; Yukon Bureau of Statistics Information Sheet #C01-03); 2006 data from Statistics Canada 2006 Census

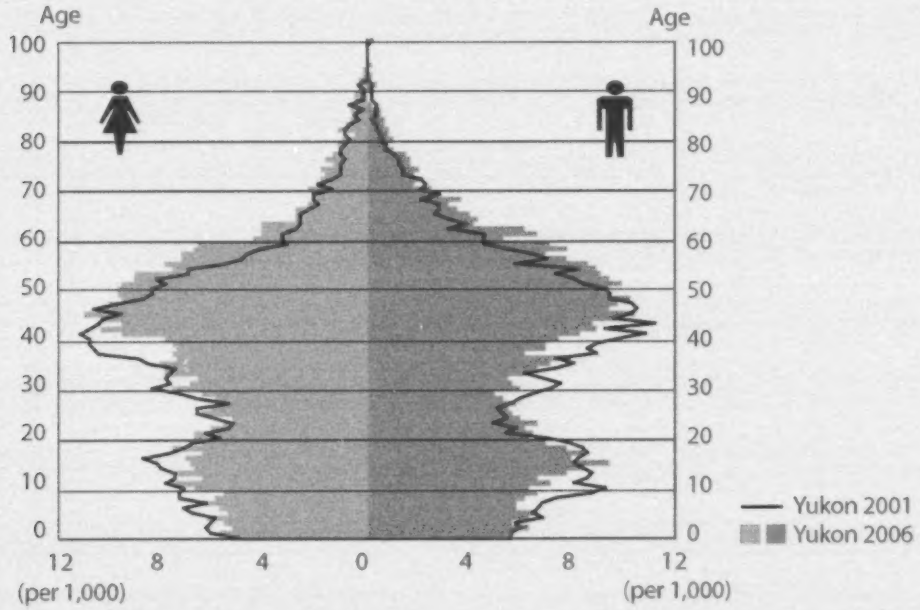
Average age of the population (2006)



How young are Yukoners? In contrast to the other two territories, Yukoners are not as young as they may think, with a median age only slightly younger than Canadians as a whole. (By definition, half of the population is younger than, and half older than the median). The 2006 census found a median age of 38.4 years in Yukon, compared with 39.5 years for Canada as a whole. Northwest Territories and Nunavut had median ages of 31.2 and 23.1 years, respectively.[1]

The 2006 census also demonstrates the continuing shift towards an older population. The so-called "demographic bulge" has gradually shifted from the 20-30 year group in the 1970's, through the 30-40 year group in the 90's, and now sits around the 50-year mark. As shown in the age pyramid, 817 (18%) Yukoners were under 15 years old, 4,649 (14%) were between 15 and 24 years old, 9,481 (29%) were between 24 and 44 years old, 9,993 (31%) were between 45 and 64 years old, and 2,395 (7%) were 65 or older.[3]

Yukon's population is ethnically diverse with 14 First Nations (and 8 different language groups), a majority Anglophone population of various origins, a strong Francophone presence, and an increasing number of immigrants from around the globe. Over 10.6% of Yukon's population was born outside of Canada.[4] Census data from 2006 showed that a quarter of the population (25.9%) reported having aboriginal ancestry.[5] There is a high degree of mobility into and out of the territory. 14.5% of Yukoners reported living in a different territory, province or country in the five years leading up to 2006, compared with 6.8% across Canada.

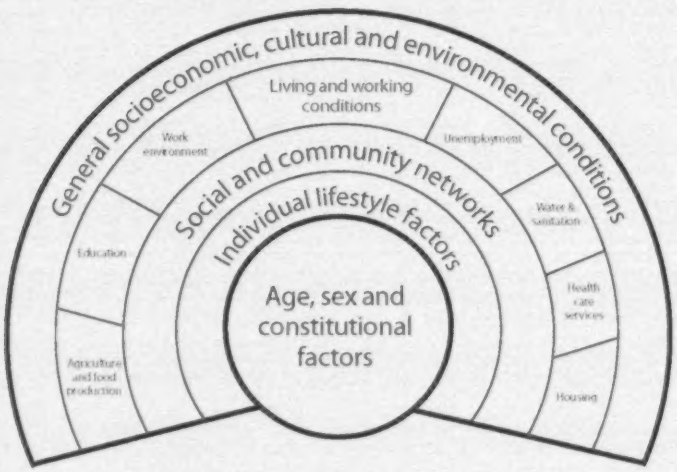


B. Determinants of health

How healthy are Yukoners? Health can mean many things. The Yukon *Health Act* defines health as 'the physical, emotional, social, mental and spiritual well-being of residents of Yukon in harmony with their physical, social, economic and cultural environments'.

As expressed in this statement, many factors combine together to affect the health of individuals and communities. These factors include social, cultural, economic and physical environments, individual behavior, and biology. Together, these factors are known as the "determinants of health" and they describe where we live, how we live, and who we live among. To understand health outcomes, we must first have some understanding of the social context in which individuals live. We do make lifestyle choices, but those choices are in turn influenced by what kind of culture and environment we live in. Even our interactions with health care professionals are partly determined by social and environmental determinants.

In this section we will explore a series of determinants of health, including education, income, employment, sense of belonging to local community, crime rates, food security, and drinking water quality. While the list is by no means comprehensive, it includes the most influential health determinants, and highlights others that are of specific relevance to the Yukon population.



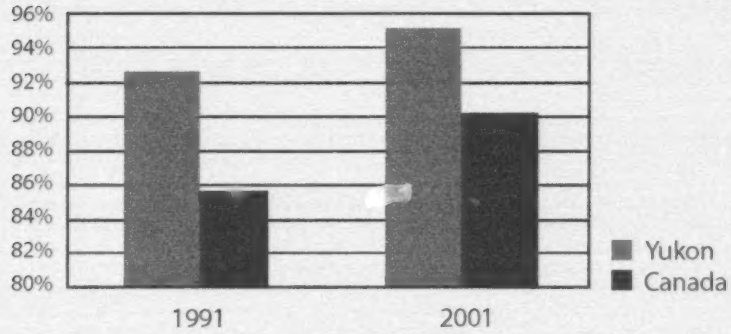
1. Education

Education and literacy are key indicators of socio-economic status, and thus are important health determinants. Effective education for children and lifelong learning for adults are key contributors to health and prosperity of individuals and of the country. Education equips people with knowledge and skills for problem-solving. Education, literacy and numeracy (skills with numbers and calculations) can lead to gainful employment, job security and success, and facilitate active community participation. In addition, people who are literate are able to access and understand information to help keep themselves and their families healthy.

The level of college or university attainment for Yukon adults 15 years of age or older is comparable to other jurisdictions: slightly lower than BC and Ontario, and slightly higher than Alberta. The 2006 census data on education show that 17.8% of the Yukon population aged 15 and over held at least a Bachelor's degree, up from 15.9% in 2001. This compares with 18.1% of all Canadians in the same age group in 2006. Meanwhile, 77.3% of the Yukon population over 15 years of age had completed high school, an increase of 2.0% since 2001. This compares with 76.2% of Canadians in the same age group in 2006.[9]

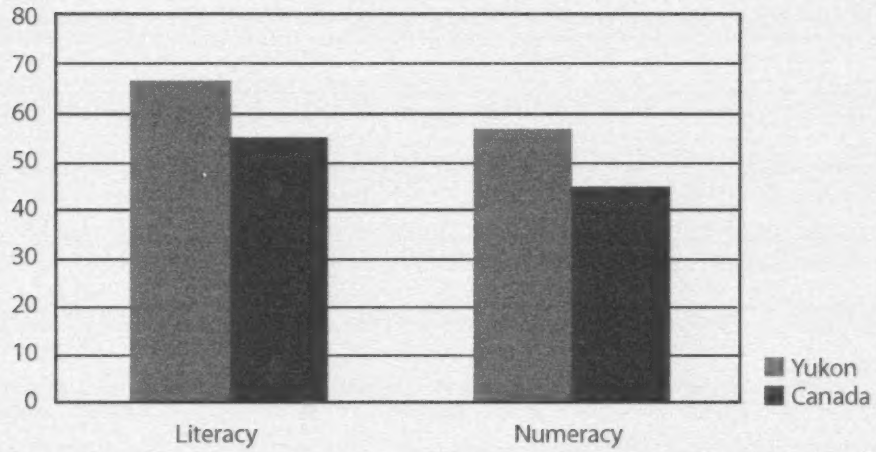
A grade nine education can be used as a proxy for the level of literacy required for full participation in community life. In both Yukon and Canada, there has been a small but progressive increase in the number of individuals with at least a grade nine education in recent years. The percentage of Yukoners aged 15 and over with at least a grade nine education rose from 92.7% in 1991 to 95.2% in 2001. Nationally, the figure rose from 85.7% in 1991 to 90.2% in 2001.[7] As yet, there are no 2006 census data to compare in this category.

Grade 9 completion (1991 and 2001)



The International Adult Literacy and Skills Survey conducted in 2003 found that Yukon had the highest average prose literacy scores of all the provinces and territories.[8] The survey measures literacy on a five-point scale, where level 1 is at the bottom of the scale, and level 3 is considered to be the threshold level for coping with modern societal skill demands. An estimated 67% of Yukoners aged 16 and over were at level 3 or higher in prose literacy, as compared to 55% of all Canadians in the same age group. Similarly, 57% of Yukoners aged 16 and over were at level 3 or higher for numeracy skills, as compared to about 45% of all Canadians.

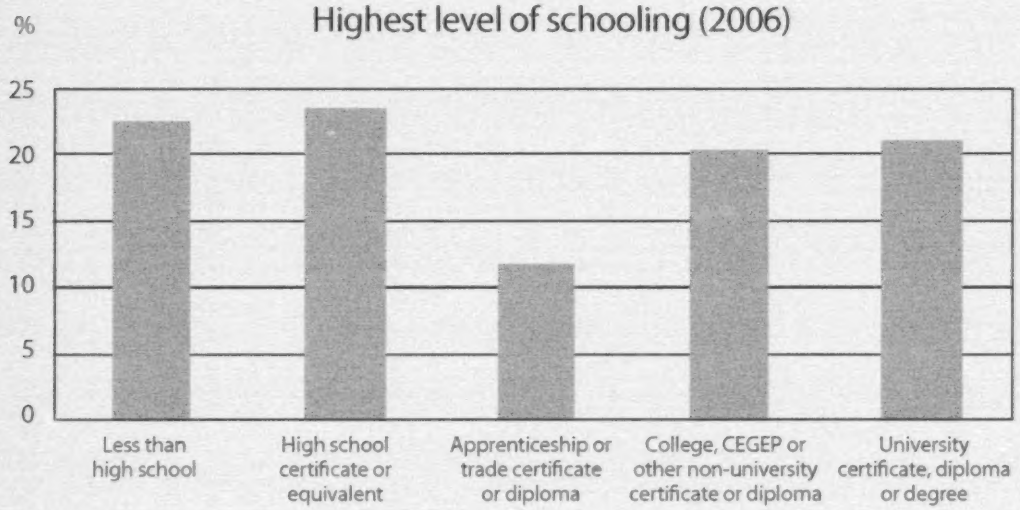
Adult population with adequate literacy and numeracy skills (2003)



A further analysis from this survey looked specifically at health literacy; that is, how well can we navigate the various sources of health information—such as that found in books, written advice from a doctor, or on the internet—to improve or maintain our health? Yukoners scored the highest in the country for this ability. Health literacy is an important a concept with significant consequences.

There is evidence that health literacy is associated with health outcomes. In other words, the higher the level of health literacy, the better off the individual, the region, or the nation. This shouldn't be surprising. It makes sense that with higher literacy skills, people will be better equipped to prevent injuries, and better able to take responsibility for their health.

Though overall these results reflect well on the literacy and numeracy skills of Yukoners as compared with Canadians as a whole, we must bear in mind that an estimated third of the Yukon population (33%) aged 16 or over were at the lower levels (level 1 or 2) in prose literacy, while 43% were at level 1 or 2 in numeracy.[9] Yukon likewise shares with the rest of the country significant numbers of people scoring at unacceptably low levels of health literacy. There is significant room for improvement in the territory in improving literacy amongst those less literate, and in adapting health teaching to differing literacy levels.

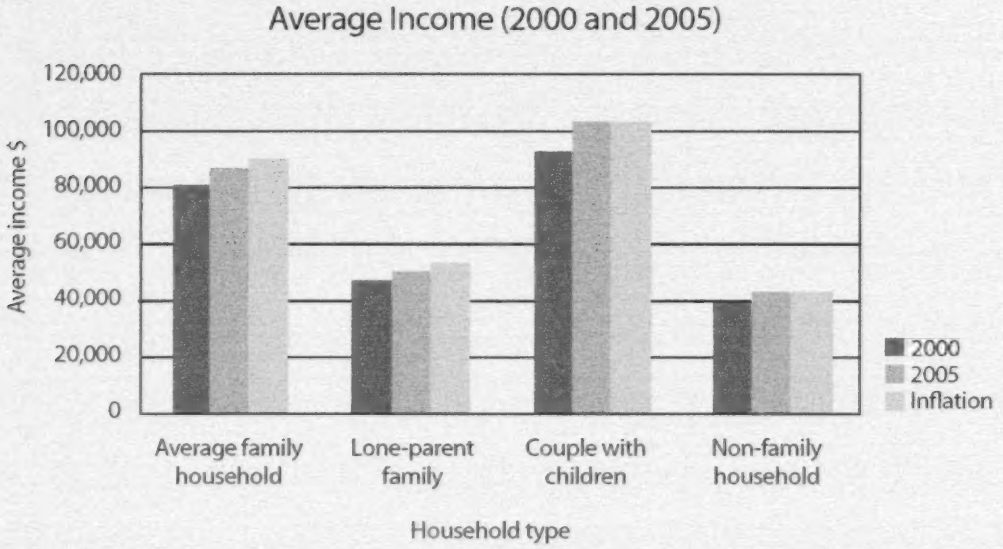


2. Income and cost of living differences

Like education, income is an important determinant of health. Income influences the extent to which individuals and families have access to safe housing, sufficient good food, and other basic necessities of life. Health status improves at each step up the income hierarchy. However, while individual prosperity is important, the distribution of income and wealth on a societal level is of even greater importance. Societies that have a relatively equitable distribution of wealth have healthier populations than societies where there is a gross imbalance between the rich and the poor. This can be seen in the example of the United States and Cuba. The USA's gross domestic product per capita is about four times that of Cuba. Yet income is much more evenly distributed in Cuba, and most health indicators, such as life expectancy and perinatal mortality, are equal or superior.[10]

Income disparity in Yukon may actually be increasing, as it is in Canada as a whole. According to the Canadian Public Health Association, median income increased in Canada among the richest quintile of the population by 16.4% in the 25 years between 1980 and 2005, while falling by almost 21% among the poorest quintile. Here in Yukon, the average annual household income of Yukon families increased from $81,200 in 2000 to $86,970 in 2005. However, after adjusting for inflation, this wage increase has not been enough to compensate for the declining purchase value. According to the Bank of Canada, the average annual rate of inflation over this period was 2.2%, or 11.5% over the 5-year period.[11] Whose wages kept up the best with inflation? Lone parent families, the least wealthy family structure, saw a mere 5% increase, from the 2000 average income of $47,875 to $50,296 in 2005, while the wealthiest households--couples with children-- enjoyed a 10.6% increase, almost keeping up

with inflation. These families earned, on average, an annual income of $103,729 in 2005, compared to $93,753 in 2000.[12] Non-family (single) households had the lowest earnings, at an average of $43,130 in 2005.[13]



Another way of looking at differences in economic well-being is by examining cost of living measures. The cost of living differential is a relative measure that can be used to make comparisons between jurisdictions, or between years. Prices in Whitehorse are comparable to those in other urban areas such as Vancouver, but prices are typically higher in the smaller Yukon communities. Costs are particularly high in Old Crow, most likely because of the cost of importing goods by plane; Old Crow is the only Yukon community that cannot be accessed by road year-round. The cost of living differential for Yukon communities, based on the isolated post allowance, is shown in the table below for 2007.[14]

Cost of Living Price Index Differential Range, based on Isolated Post Allowance, 2007

(Vancouver = 100)

Example: If an item costs $10.00 in Vancouver, the same item would cost between $12.50 and $12.99 in Beaver Creek.

Community	Range	
Beaver Creek	125	129
Carcross	115	119
Carmacks	115	119
Dawson City	125	129
Destruction Bay	115	119
Faro	120	124
Haines Junction	115	119
Mayo	120	124
Old Crow	160	164
Pelly Crossing	120	124
Ross River	120	124
Teslin	120	124
Watson Lake	125	129
Whitehorse	below qualifying	

Reproduced from 2007 Yukon Annual Statistical Review, Yukon Bureau of Statistics.

Source: Treasury Board of Canada; www.tbs-sct.gc.ca/pubs_pol/hrpubs/ipgh-dpill/ipgh-pile-a_e.asp

Notes: A Living Cost Differential (LCD) may be authorized at certain isolated posts where abnormally high prices prevail for food (purchased from stores and restaurants), household supplies and operations, household/tenant insurance premiums, transportation expenses, personal care supplies and services, pharmaceutical products (excluding prescribed drugs), entertainment supplies, rental of cablevision/satellite services, reading materials, tobacco and alcoholic beverages.

3. Employment

People who have more control over their work circumstances and fewer work-related stresses tend to be healthier and longer-lived than those in more stressful or riskier jobs. Unemployment, underemployment, and stressful or unsafe work conditions are associated with poorer health.

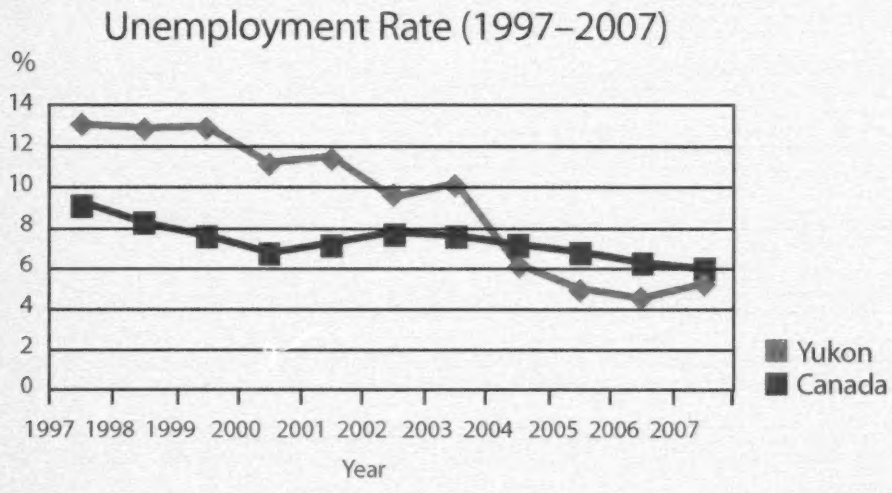
Employment is closely associated with education and income, each of which makes a contribution to an individual's mental and physical health. A widely used measure of workforce participation is the unemployment rate—the percentage of the labour force that actively seeks work but is unable to find employment at a given time. Discouraged workers—persons who are not seeking work because they believe the prospects of finding it are extremely poor—are not counted as unemployed or as part of the labour force. A low unemployment rate is an indicator of a healthy community, showing that it is able to support and sustain its work force. When a job is lost, not only is it a loss to society and the economy, but the loss of income can also create hardship for individuals and families.

Yukon's unemployment rate has greater annual and seasonal fluctuations than that of Canada as a whole. A number of factors contribute to its volatility. Given the small population base of Yukon, changes in a substantial industry like mining significantly affect the unemployment rate. The table below summarizes recent trends in employment in Yukon as compared to the rest of the country.

Unemployment Rate for Yukon and Canada, 1997-2007

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Yukon	13.1	12.9	12.9	11.2	11.4	9.6	10.1	6.2	5.0	4.5	5.2
Canada	9.1	8.3	7.6	6.8	7.2	7.7	7.6	7.2	6.8	6.3	6.0

Source: Statistics Canada. CANSIM Table 282-0055.



4. Sense of belonging to local community

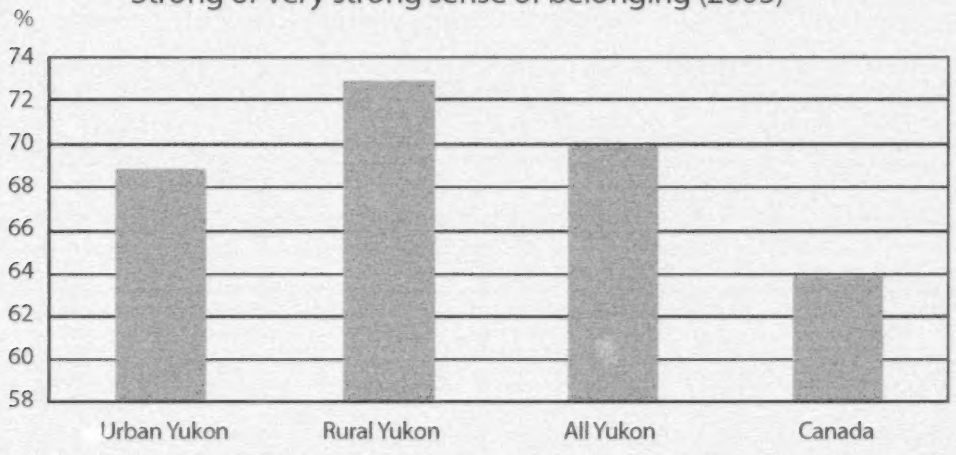
Social support is an important determinant of health. People who have strong social networks are better able to adapt to everyday stressors and unexpected life events than those whose support networks are weak. While a direct measure of social support is not available for reporting at this time, there are available data on a related measure: sense of belonging to one's local community.

Where Yukon's population lives (2006)

Beaver Creek	112	Mt. Lorne	370
Burwash Landing	73	Old Crow	253
Carcross	331	Pelly Crossing	296
Carmacks	425	Ross River	313
Dawson	1,327	Tagish	222
Destruction Bay	55	Teslin	297
Faro	341	Upper Liard	178
Haines Junction	589	Watson Lake	846
Ibex Valley	376	Whitehorse	22,114
Keno Hill	15	Yukon, unorganized +	1,286
Mayo	248	Other	305

Yukoners appear to have a higher sense of belonging to the local community than Canadians as a whole. In the 2007 Canadian Community Health Survey, 71% of Yukoners and 62% of all Canadians said their sense of belonging to their local community was 'very strong' or 'somewhat strong'.[15] There were no substantial differences between Yukon men and women, but sense of belonging was slightly stronger for rural residents than for urban residents.[16] People with the lowest household incomes had the lowest ratings of sense of belonging, with only an estimated 53% of the population in this income range reporting a 'very strong' or 'somewhat strong' sense of belonging. Similarly, those with less education had lower ratings compared to those with more education (49% vs. 75% in the 'very strong' and 'somewhat strong' categories).[16]

Strong or very strong sense of belonging (2005)



These findings reinforce our understanding that social determinants such as income, education, social networking, and food insecurity undoubtedly interact to affect the health of individuals and families.[16] On the one hand, it is important to create health promotion programs that target the root causes of ill health. On the other hand, sorting out which particular determinant has what effect can be difficult.

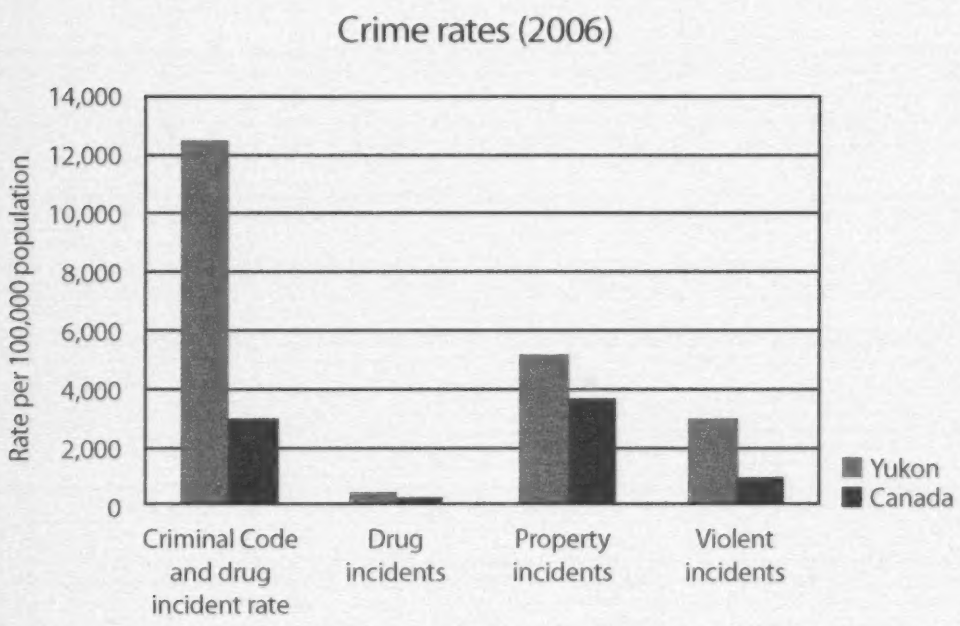
5. Crime and Violence

Contrasting with its strong sense of belonging, Yukon is unfortunately far from free of crime. A spouse beaten up, a young or elderly person "jumped", robbed, and beaten, a bar fight that ends in broken teeth and broken fists: such scenes are far too common, and not only on Friday or Saturday nights. A peaceful community is more likely to be a healthy one, whereas violent crime can touch the health not only of the individuals directly affected, but also of others around them. Crime can create a climate of fear that damages social networks, increases stress, and limits opportunities for healthy behaviors such as physical activity.

The crime rate per capita is considerably higher in the northern territories than in the southern provinces. The table below shows the crime rate for 2006 for Yukon and Canada as a whole. The figure presents four crime categories: drug incidents, property incidents, violent incidents, and criminal code and drug incidents, which includes the first three categories plus any other infractions of the criminal code including criminal traffic violations.

For 2006, the rate of all criminal code and drug incidents in Yukon was 12,479 per 100,000 population, compared to 2,980 in Canada as a whole. Only a fraction of these were drug incidents; property incidents and violent incidents were much more commonly reported.[17,18] The territories, due to the vast geography and sparse populations, have more police per capita than the provinces, which could partly explain higher rates of various offences. However, high homicide rates support the supposition that violent crime in general is genuinely higher in the North. In fact, although overall numbers are small, homicide rates in the territories are consistently the highest in the country.

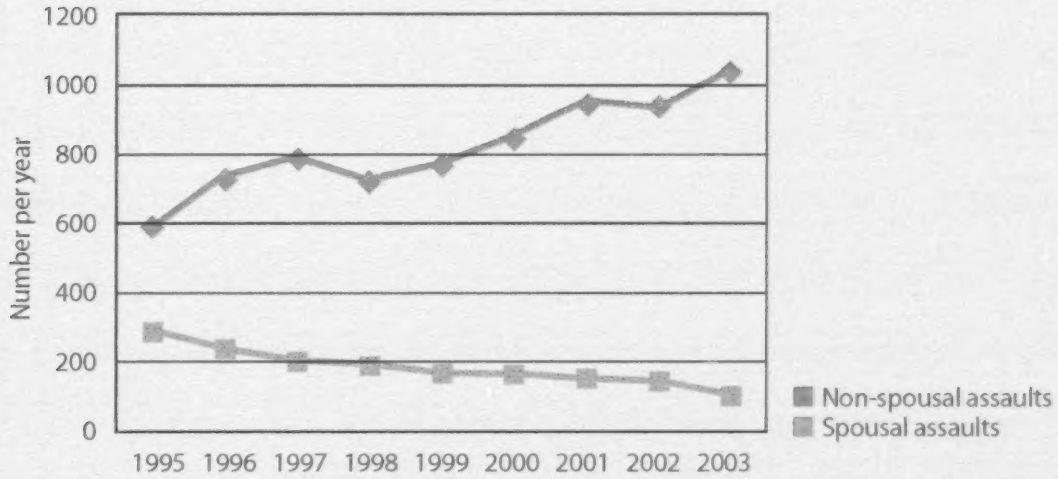
How much does alcohol play a role? According to RCMP statistics, alcohol use is reported in more than half of all assaults, and in two-thirds to three-quarters of spousal assaults.[18]



Most reported violent incidents are assaults of individuals between 18 and 64 years of age, and are perpetrated by someone who is not the spouse of the victim. In Yukon, the number of reported non-spousal assaults of adults 18-64 increased steadily from 595 incidents in 1995 to 1034 incidents in 2003. Child, teen, and elder assaults combined accounted for only 3% of all reported violent incidents in 2003.

In contrast, spousal assaults made up 8.7% of all reported violent incidents in the same year. While spousal assaults are typically under-reported, there has nonetheless been a steady, substantial decline in spousal assaults as a percentage of all violent incidents between 1995 and 2003. This percentage decline is reflected in the real number of reported spousal assaults, which fell steadily from 288 in 1995 to 107 in 2003.[18] Although female-perpetrated spousal assaults are common, the vast majority of spousal assaults are still committed by the male partner.

Reported spousal and non-spousal assaults (1995–2003)



Violence against women is particularly problematic. It is both a product of unequal rights, and a contributor to ongoing gender inequality. A 2006 Statistics Canada publication, *Measuring Violence against Women*, highlights the extent of the problem. It should be noted that these statistics represent only a small part of the story, and allow us mainly to make comparisons rather than assume we have the true numbers. The overwhelming majority of incidents of violence against women are in fact never reported.[19]

Shelter use generally correlates strongly with situations of domestic violence. In 2003/04, at least 388 women and 219 children used shelters for abused women in the Yukon, and shelter use on a single day was between three to 10 times higher in the territories than elsewhere in Canada. Acts of spousal assault against women are more likely to result in physical consequences for victims than assaults against men. Women are:

- more than twice as likely as male victims to be physically injured by partners;
- six times more likely to receive medical attention;
- five times more likely to be hospitalized due to injuries;
- three times more likely to have to take time off paid or unpaid work to deal with the consequences of the violence;
- twice as likely to report chronic, ongoing assaults (10 or more).[19]

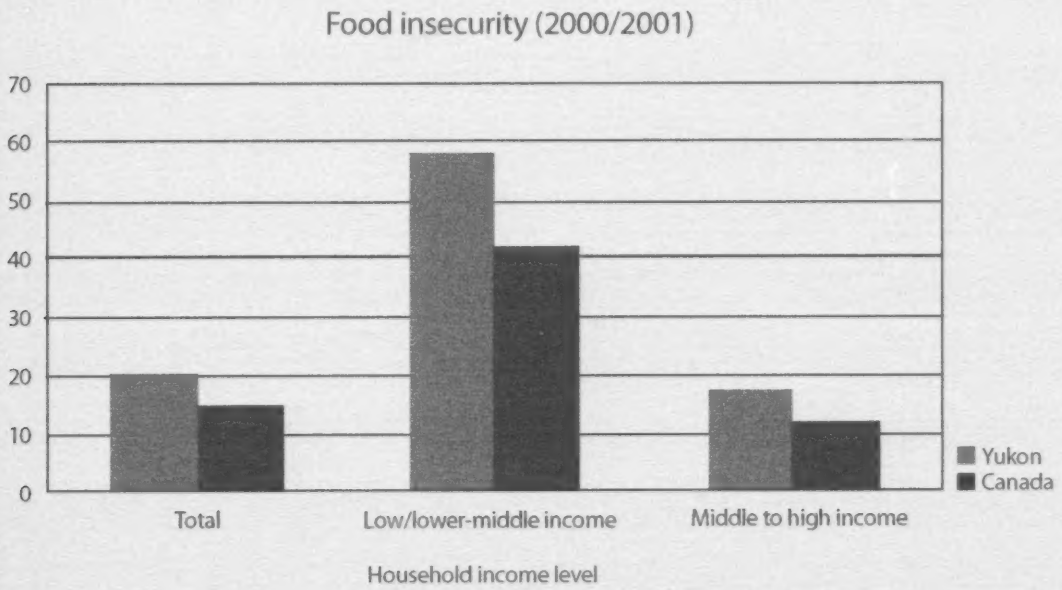
Finally, police reports of sexual offences, in which women are most often the victims, are about two to three times higher in Yukon than in any of the provinces, three to six times higher in the NWT, and seven to 14 times higher in Nunavut.

A strategy to address crime reduction is therefore an important public health measure, but equally critical is examining gender inequity—including its most serious component, violence against women—as an important determinant of health.

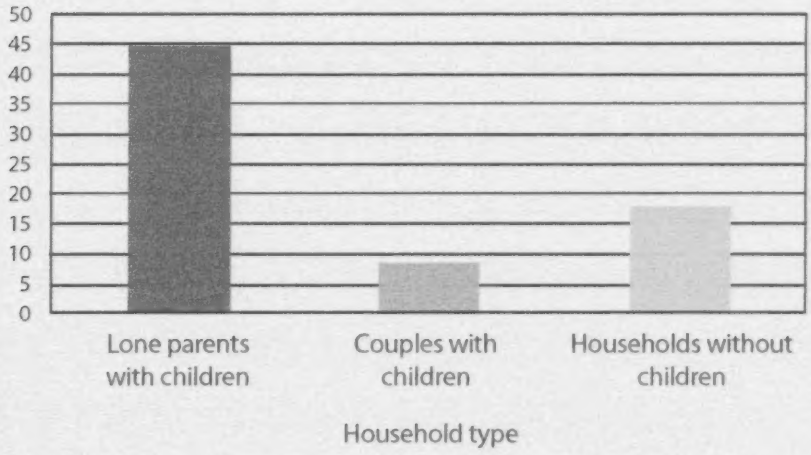
6. Food security

What we eat depends not only on personal choice, but also on factors such as adequate income to purchase nutritious foods and the availability of reasonably priced fruit and vegetables year round. Two recent surveys have examined the issue of food security in order to determine if Yukoners are getting enough to eat, and whether the food is of sufficient quality.

The Canadian Community Health Survey asked Yukon respondents about food security over the previous 12 months in a 2003 survey.[20] 11% of Yukoners said they 'often' or 'sometimes' worried that there would not be enough food due to lack of money, 11% 'often' or 'sometimes' did not have enough food to eat, and 14% reported that they 'often' or 'sometimes' were not able to eat the desired quality or variety of foods . These categories are overlapping, as an individual may have experienced more than one of the three measured forms of hardship. Overall, an estimated 16% of Yukoners experienced some form of food insecurity. Because this was optional content, national statistics are not available for comparison.



Households experiencing food insecurity (2003)



Similar findings arose out of last year's Healthy Living survey[21] which asked similar questions of Yukoners with children in elementary schools, as a follow up to distribution of the *Healthy Living Calendar* by the Yukon Government Department of Health and Social Services. This survey looked in some detail at differences between Whitehorse residents and rural Yukoners.

Around food security, the following key points emerged:

- 77% of Whitehorse residents and 53% of rural Yukoners report always having had enough of the kinds of food they want to eat
- 21% of Whitehorse residents and 46% of rural Yukoners report having enough to eat, but not always the kind of food wanted
- Only 1.2% of Whitehorse residents and 0.9% of rural Yukoners report that they sometimes do not have enough to eat
- 11% of Whitehorse residents and 16% of rural Yukoners report that they sometimes worry about running out of food before they have money to buy more
- 9% of Whitehorse residents and 14% of rural Yukoners report that sometimes the food bought just doesn't last and there isn't money to get more
- 7.6% of Whitehorse residents and 12% of rural Yukoners report that sometimes they can't afford to eat balanced meals.

Note that because of differing survey methods, the numbers from these two surveys are not the same, although the trends are similar.

While food availability affects numerous health outcomes, some of the other social determinants of health have a profound impact on food security. In 2003, those Yukoners who experienced food insecurity were more likely to receive household income that included social assistance. Of those who had someone in the household collecting social assistance, an estimated 63% experienced some aspect of food insecurity, as compared to 13% of those in households that did not receive social assistance. Similarly, an estimated 54% of those in households earning under $30,000 a year experienced food insecurity, as compared to 13% of those with mid-range household incomes ($30,000-59,999) and 7% of those with high-range household incomes ($60,000 and up).

Family structure was also closely associated with food insecurity. An estimated 45% of single-parent families with children under 25 years of age experienced food insecurity, compared to 18% of households without children and only 9% of couples with children under 25. Others who were vulnerable to food insecurity included rural residents, 24% of whom experienced food insecurity, as compared to 13% of urban residents.[20]

What can we conclude? First, it is difficult to examine food security separately from income. Second, food security provides us with another example of the effects of multiple social determinants interacting. This is especially true in rural Yukon where food security issues are of higher concern, and may be more complicated due to difficulties posed by transportation and its expense, the limited availability of grocery stores, and a stronger reliance on subsistence food gathering and traditional food consumption.

7. Drinking water quality

What can be more fundamental to health than a clean water supply? Thankfully, most Yukoners have access to a reliable source of clean water, but disruptions in the supply of quality of water do still occur, as in the Boil Water Advisory that was issued in one of the communities in 2007. Such advisories are naturally upsetting to a community, and lead to an examination of what improvements can be made to the operation and maintenance of public water supplies.

Water is perhaps the most obvious example of how the physical environment in which we live is an important determinant of health, and the safety of the water supply is critical. In Yukon, water samples from every system are submitted at regular intervals to the Drinking Water Laboratory operated by Environmental Health Services in Whitehorse for bacteriological testing. The laboratory, which is accredited by the Canadian Association for Environmental Analytical Laboratories Inc.(CAEAL), tests for total coliforms and *Escherichia coli* (E.coli). The presence of these organisms indicates that the water has been contaminated, and may be unsafe for human consumption.

Many Yukoners receive their drinking water from one of 16 large public drinking water systems in Yukon. A large public drinking system is defined as a system with 15 or more delivery sites on a piped distribution system, or 5 or more delivery sites on a trucked distribution system. The 16 public drinking water systems are listed in the table below.

System owner	Piped	Trucked
Burwash		•
Carcross		•
Carcross Tagish First Nation		•
City of Whitehorse	•	
Dawson City	•	•
Faro	•	
Haines Junction	•	
Keno City		•
Lobird Trailer Park	•	
Mayo	•	
Old Crow		•
Pelly Crossing		•
Ross River		•
Tagish		•
Takhini River Subdivision		•
Village of Teslin		•

Boil water advisories, which advise consumers to boil their water before consumption in order to prevent water-borne illness, are fortunately rare. Over the last five years, none of the 16 public water systems listed above has been issued a boil water advisory. However, there have been three recent instances (in 2002, 2005 and 2007) where unsatisfactory results of water samples from water delivery trucks led to an advisory being issued to residents who received water from those trucks. In each case, standard protocols were followed to clean and disinfect the truck and the water holding tanks. After two sets of satisfactory test results, the trucks were considered to be safe for water delivery.

Part 2
Personal Health Practices

During a check-up with a doctor or nurse, a person may be asked questions such as "Do you smoke?" "How much exercise do you do, and what types?" or "What did you have for dinner last night?" These questions refer to lifestyle choices and health habits that—along with the determinants of health discussed in the previous section—influence a person's overall health status.

Although we often talk about lifestyle and behavior as though they are completely under the individual's control, many of the choices we make are shaped by our environment, our culture, and other factors. Physical activity provides an example. The form that physical activity takes will depend on the availability of resources such as walking paths, swimming pools, or hockey rinks. Use of these resources may depend on personal finances. And cultural factors tell us what represents an appropriate form of physical activity for an individual—for example, joining a gym versus being out on the land.

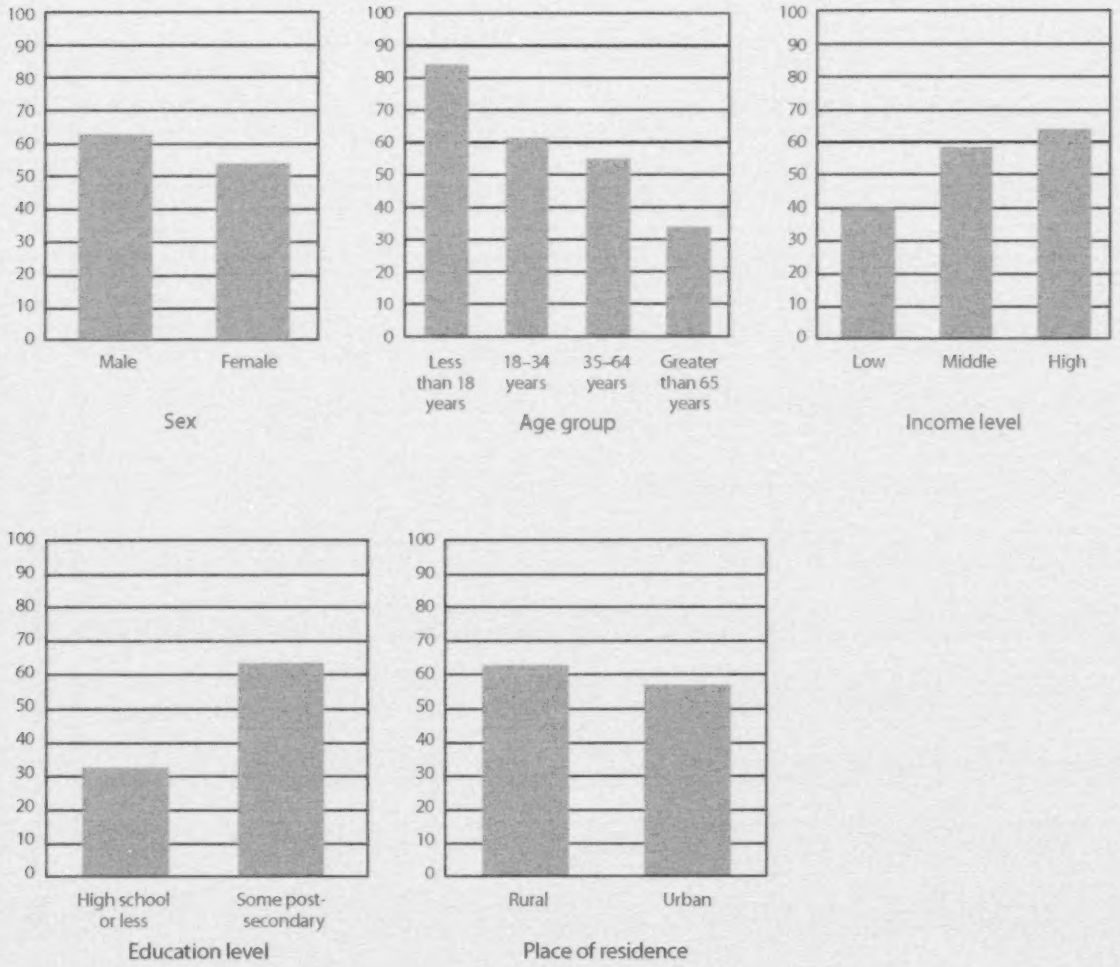
Not all Yukoners have equal opportunities to make healthy choices: what seems easy for some may be very difficult for others to achieve. Interventions that support the creation of supportive environments will enhance the capacity of individuals to make healthy lifestyle choices in a world where many choices are possible.

In this section, we explore some of the lifestyle and behavioral factors that influence health, including physical activity, diet and weight; breastfeeding; sexual behavior; tobacco and alcohol use; and driver safety.

1. Physical activity

There are many reasons to engage in regular physical activity, and few reasons to avoid it. The benefits are well-known by most people. Activity can enhance a person's physical and mental health, fitness, energy levels, posture and balance. Exercise leads to stronger muscles and bones, and can help with weight control, reduce stress and improve self-esteem. Regular physical activity reduces the risk of conditions such as high blood pressure, coronary heart disease, stroke, some cancers, non-insulin-dependent diabetes, obesity and osteoporosis. And there is growing evidence that physical activity reduces complications and improves functioning in people who have chronic conditions such as diabetes and arthritis. For older Yukoners, physical activity increases their ability to remain independent and reduces the burden of health care costs associated with chronic illnesses.

Physically Active Population 2005



Do we engage in enough physical activity? Although Yukon performs better than Canada as a whole, the answer is "probably not". An estimated 55% of Yukoners 12 years and older were found to be active or moderately active in 2007 based on their participation in leisure activities such as sports, walking, fishing or gardening.[15] By comparison, 49% of Canadians were active or moderately active. This continues a pattern seen over the past decade, with Yukon residents consistently reporting higher activity levels than the rest of Canada.

Men and women were equally physically active in the territory, with 55% of both males and females indicating they were active to moderately active in 2007 [15]. Younger age groups also reported higher levels of physical activity than older Yukoners. The highest rate of physical activity is for Yukon youth, of whom 78% were active to moderately active in 2007. By contrast, an estimated 59% of adults aged 20-34, 51% of adults 35-64, and only 31% of seniors achieved these levels.

Income, educational level and location were also strongly related to physical activity. Activity increased as income and level of education increased, and rural residents were more active than urban residents.[16]

2. Healthy eating

Diet and nutrition are an important part of health, wellness and culture. In addition to sustaining life, food is a source of enjoyment, pride, tradition, and cultural diversity. Healthful diets prevent disease and promote health, and are important to maintain at community and individual levels.

Which foods we choose depends on a number of factors. In Yukon, availability and cost of food play a particularly important role. Traditional foods provide an important source of nutrition for many families in the territory. Traditional diets are generally very healthy and are protective against diseases such as obesity, diabetes, heart disease and stroke. While a balanced diet is crucial for healthy growth, development, functioning and protection from illness, it is not universally accessible.

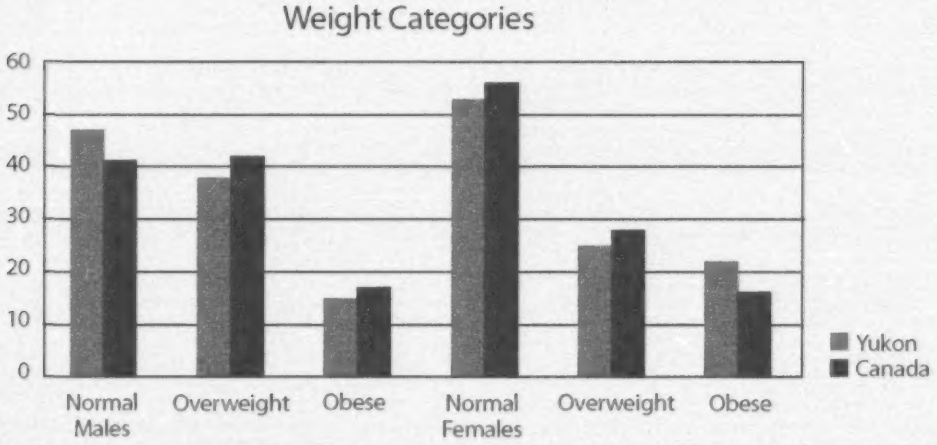
The 2003 Canadian Community Health Survey included a section on food choices.[20] This provides us with some estimates of what proportion of the population made food choices based on the content of those foods, or with specific health concerns in mind.

An estimated 64% of Yukoners and 68% of all Canadians report choosing foods based on its nutritive content. Some groups were more likely than others to make their food decisions based on this information. Females were somewhat more likely than males to base their food choices on nutrition (68% of Yukon females and 60% of males), and older Yukoners more than younger ones (30% of youth vs. 86% of seniors).

People with a higher reported income were more likely to make food choices based on content than people with less income (71% vs. 56%). In contrast, income was not strongly associated with nutrition-based food choices on a national level, bringing up the possibility that poor Yukon households may be at a particular disadvantage when it comes to nutritional opportunities. It is interesting, however, that responses were not substantially different between urban and rural Yukon residents, despite Yukon's rural areas having a higher cost of living.

3. Healthy weights

The term "obesity epidemic" is familiar to many people. Over the last few decades, the average weight of the population has been gradually increasing, and the proportion of the population that is considered to be overweight or obese has reached historically high levels. This has happened in Yukon, across Canada, and in most developed countries around the world. The question of why has not been definitively answered, despite a significant amount of research in this area. What is well understood, however, is that an individual's bodily weight is impacted by nutrition, physical activity, and those social determinants of health (such and income and food security) that impact one's ability to eat healthy foods and get adequate exercise. Meanwhile, bodily weight is itself a health determinant, as those who are an unhealthy weight are more susceptible to developing chronic diseases or being injured. Overweight and obesity are often a problem to the affected individuals, and also present challenges at a societal level.



How do Yukoners compare to people in the rest of the country? To answer this question, we use a standard measure called the Body Mass Index (BMI). BMI assesses a person's weight in relation to their height, since people of different heights would not be expected to weight the same. While the BMI measure is not perfect—it does not work as well among children or seniors as it does in adults, for example—it is a useful standard measure for comparing the weight-related health of populations. A person's BMI is usually grouped into one of four categories: underweight, normal, overweight or obese.

For adults 18 years and older living in Yukon in 2005, the ratio between normal and overweight or obese individuals was roughly 1:1. That is, there were approximately the same number of people who were a normal weight as there were people who were overweight or obese. This ratio is similar to Canada as a whole.

The 2007 data have changed somewhat from 2005. In 2007, 25% of Yukoners were somewhat overweight and 25% were obese, while in 2005 these values were 32% and 18% respectively.[15,16] There were some notable gender differences in 2007. Of those who were defined as 'overweight' or 'obese,' women were more likely than men to fall into the obese category. An estimated 22% of adult Yukon women were overweight, and 22% were obese; of men, 29% were overweight and 29% were obese. These figures were somewhat different from those seen at the national level, where a much higher proportion of the male population was overweight (39% of males compared to 26% of females), but similar proportions of the populations were obese (17% of males and 15% of females).

While income and education were not strong predictors of weight status among Yukoners, there was a relationship between physical activity and BMI. People who were inactive were more likely to be obese than those who were at least moderately active. Differences were more pronounced at the national level, supporting a connection between physical activity level and BMI.

In addition to physical activity, there was a strong relationship between age and BMI at both the territorial and national levels. Younger people were more likely to be normal weight and less likely to be overweight or obese than older adults. Whereas 80% of Yukon youth were normal weight, this figure decreased to 60% of adults aged 18-34, 47% of adults 35-64, and 37% of seniors. While obesity levels crept up slowly with age, the overweight category ballooned from 15% of youth to 24% of young adults, 34% of mature adults and 41% of seniors. These figures are within a few percent of the national values in all categories.[16]

4. Breastfeeding

Yukoners should be proud of the high rates of breastfeeding achieved by women and babies in the territory. Being fed human milk is an important determinant of infant health and promotes optimal child growth and development.

A 2005 survey found that an estimated 99% of women in Yukon who had given birth over the past five years attempted to breastfeed their infants. This compared to 87% of women across Canada.[16] This high initiation rate on the part of Yukoners can be attributed partly to positive social attitudes towards breastfeeding, as well as to strong breastfeeding promotion efforts at the hospital where most Yukon women give birth, and follow-up public health programs that support breastfeeding in the women's home communities. While the estimate for Yukon is not as reliable as national estimates due to our small population size, it is nonetheless noteworthy, as it reflects an improvement over the 2001 estimated breastfeeding attempt rate of 90%.[22]

Breastfeeding rates (2005) (not in 2003 report)

	Percentage of women who gave birth that attempted breastfeeding (%)	Percentage of women who breastfed exclusively for the first six months of life (%)
Yukon	99	42
Canada	87	30

Data source: CCHS 2005 (In report)

Not all women who start to breastfeed are able to maintain it over a period of many months. Extended breastfeeding requires social support, and can be hampered by societal influences such as formula and baby food marketing campaigns as well as personal factors such as the need to return to work full-time while one's infant is still very young. While the World Health Organization recommends exclusive breastfeeding for the first six months of life, only an estimated 42% of Yukon women reached the six-month milestone, and many of those women were likely supplementing their babies' diets with other foods well in advance of their half-birthday. That said, the Yukon figures are better than those found at the national level, where only 30% of women breastfed their last child for a full six months or longer. Similarly, an estimated 57% of Yukon women exclusively breastfed their last child for at least four months, in comparison to 45% of Canadian women.[16]

5. Sexual behaviour

Personal health practices can have a powerful impact on sexual health. The northern parts of Canada have a high endemic rate of Chlamydia, and periodic outbreaks of other sexually transmitted infections (STIs), such as Gonorrhea and Hepatitis. (Information on STI rates and numbers of cases are described more fully in Part 3 of this Report.) The spread of STIs makes condom use particularly important in Yukon and the other northern territories and provincial health regions, particularly among people who are in short-term, casual or open relationships. Youth and young adults are most likely to be in these categories, and are at highest risk of being exposed to an STI.

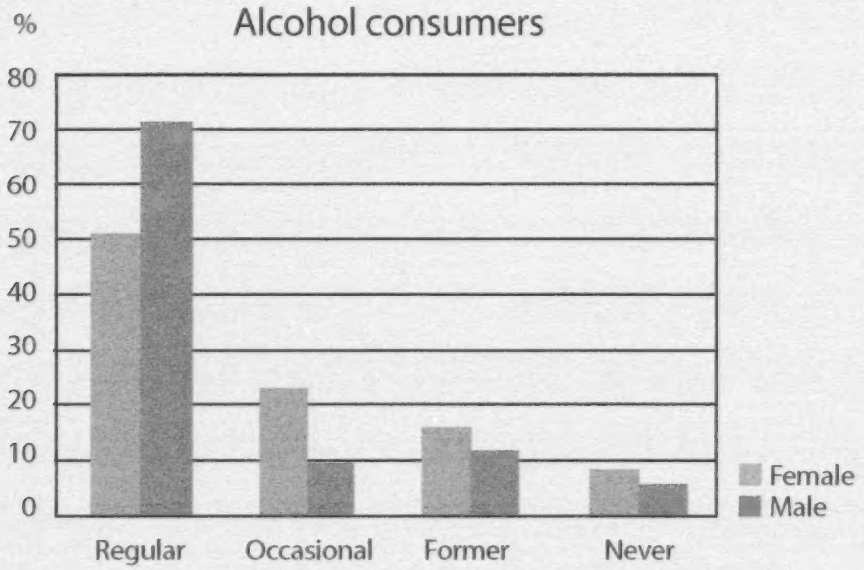
The Canadian Community Health Survey estimates for 2005 show that Yukoners were slightly more likely than Canadians as a whole to have had more than one sexual partner over the past 12 months. While an estimated 87% of sexually active Canadians between 15 and 49 years of age had only one partner over a 12-month period, 82% of Yukoners met the same criteria. Condom use was similar between Yukoners and Canadians who had multiple partners, at an estimated 53% of Yukoners and 55% of Canadians.

For both Canada and Yukon, condom use was higher among males who had multiple partners, as compared to females. Of those with more than one sexual partner in the past year, approximately 57% of Yukon men (60% nationally) and 48% of Yukon women (49% nationally) said they had used a condom the last time they had intercourse. There were some geographic differences, with 50% of multi-partnered urban Yukoners using a condom last time they had intercourse, as compared to 60% of rural Yukoners.[16]

Yukon offers a number of services to help the population, and youth in particular, to avoid unwanted pregnancies and sexually transmitted diseases. In addition to walk-in counselling at Yukon Communicable Disease Control and community health centres, the territory operates *YK Style*, a free, confidential sexual health information line.

6. Alcohol consumption

Generally, alcohol consumption is associated with social occasions, and is used in celebration and ceremony. With moderation, alcohol use is not associated with adverse social and health consequences. However, alcohol misuse and dependency can result in harmful and tragic personal events, disruption of family relationships and interference with work and social environments.



The Canadian Community Health Survey shows that in 2005, approximately 62% of Yukon's population ages 12 and over were regular drinkers; that is, they reported drinking alcohol once a month or more. A further 17% were occasional drinkers (consuming alcoholic beverages less than once per month), 14% were former drinkers, and 8% never drank. There is some variation by gender, with a larger estimated proportion of Yukon males (71%) being regular drinkers than females (52%), and with more females than males in the occasional, former and non-drinking categories. These statistics are very similar to those seen on a national level.

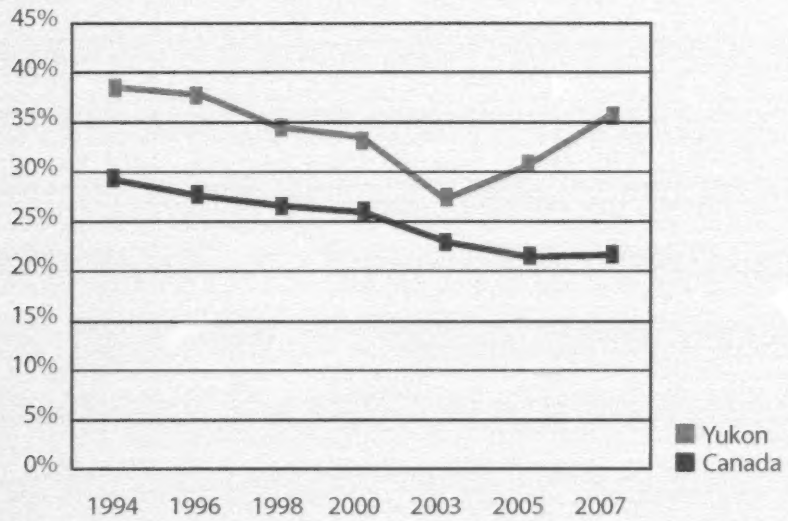
Given the high cost of alcoholic beverages, it is not surprising that income is strongly associated with regular drinking, with a larger proportion of high-income household individuals (73%) consuming alcohol on a regular basis compared to mid-range income (41%) and lower-income (48%) individuals. Drinking rates among urban and rural Yukon residents are similar.

Frequent heavy drinking is most likely to have a negative health impact. In the Yukon, an estimated 32% of females and 36% of males reported having drunk 5 or more drinks on one occasion at least once a month over the past 12 months. Nationally, a much lower percentage of women than men report these drinking patterns (13% vs. 30% respectively).[15]

7. Smoking

Smoking is much less common than it was several decades in the past. However, smoking has recently been on the rise in Yukon. In 2003, 27.5% of Yukoners ages 12 or older reported that they were current smokers. In 2007, this figure had risen to 36.0%.[23] This trend is not replicated across the rest of Canada. Nationally, current smokers comprised 22.9% of the population in 2003, and 21.9% in 2007. Although rates rose slightly in the NWT during that time (from 36.3% to 38.0%), they decreased in Nunavut (64.8% to 58.5%).

Daily or occasional smokers ages 12 and older (1994–2007)



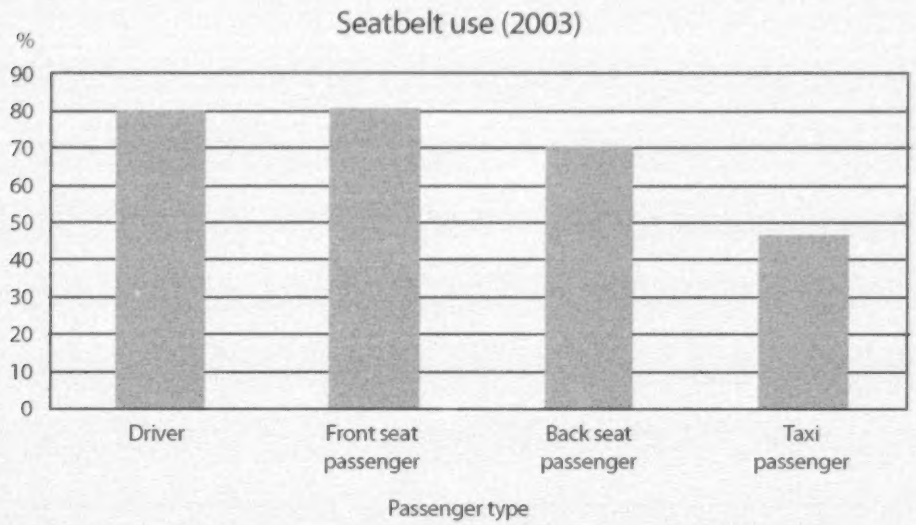
The smoking rate in Yukon was highest among young adults; an estimated 43% of Yukoners between 20 and 34 years of age were smokers in 2007.[15] Information on income and education in relation to smoking is available from 2003. At that point, people from low-income households were twice as likely to be current smokers as those from high income households, and smoking rates were much higher among those with fewer years of education. The differences between men and women were slight, although men were more likely to smoke. Although figures are not available for 2007, the patterns are likely to be the same.[16]

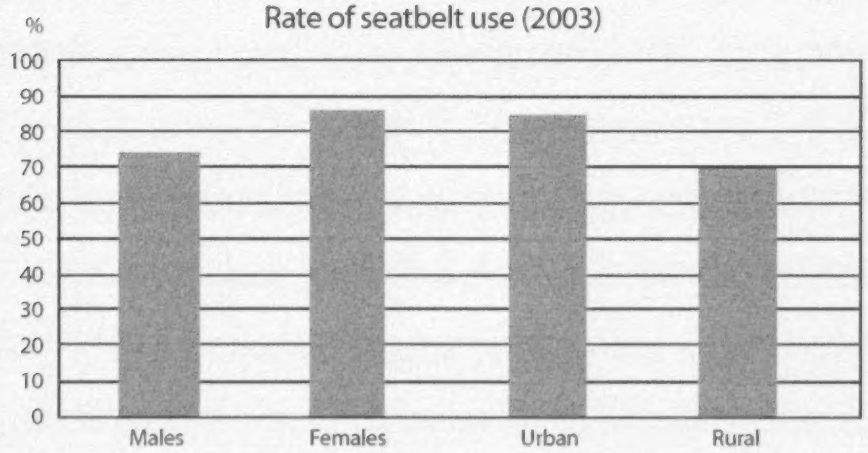
8. Driver safety

Motor vehicle collisions are a significant and avoidable source of injury and death. Across Canada, motor vehicle collisions account for 1.3% of deaths. Traffic fatalities are especially high among people under age 30, where almost one in five deaths is the result of a motor vehicle collision.[24]

Compared with the rest of Canada, Yukon fares very poorly in traffic safety. Between 2000 and 2004, Yukon experienced an average of 16.4 deaths per 100,000 population per year. This was the highest rate of any province or territory, and the national average was 9.0 per 100,000.[24]

One indicator of driver safety is the use of safety equipment, and in particular, seatbelts. Though seatbelts are required of both vehicle drivers and passengers in the territory, not all Yukoners report consistent seatbelt use. In 2003, an estimated 80% of Yukoners always wore a seatbelt when driving and roughly the same proportion (81%) always wore a seatbelt as a front seat passenger. However, consistent seatbelt use dropped to an estimated 70% for back seat passengers, and 47% for taxi passengers. Females were more likely than males to always wear a seatbelt while driving (86% vs. 75%), as were those with higher education (85% with post-secondary education vs. 75% with a high school education or less), older adults (83% of adults aged 35 and vs. 77% of those under 35), and people living in urban areas (85% vs. 70% of rural respondents).[20]



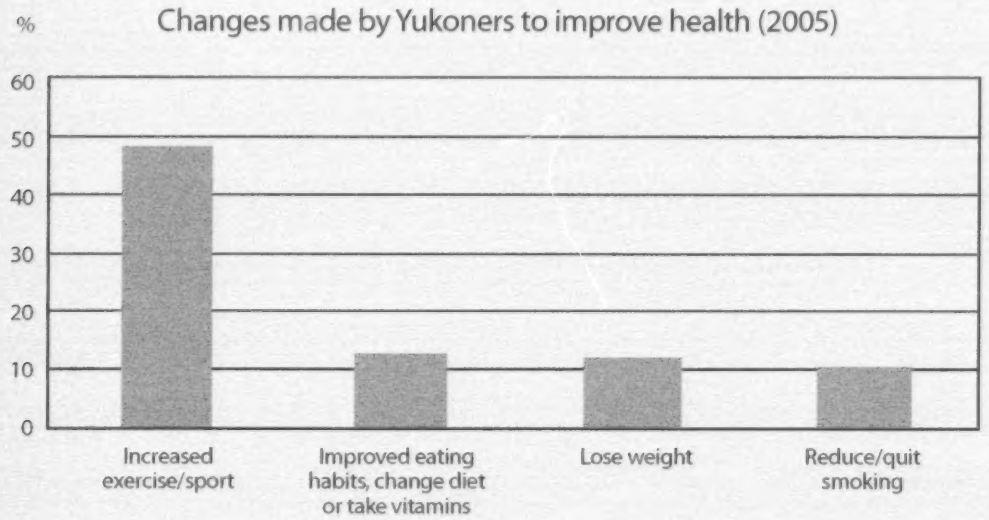


Drinking and driving is also an activity that greatly increases the chance of a serious motor vehicle collision. In 2003, an estimated 11% of Yukoners drove after consuming two or more alcoholic drinks in the previous hour, and 15% were passengers in vehicles driven by someone who had been drinking.[18]

9. Changes made to improve health

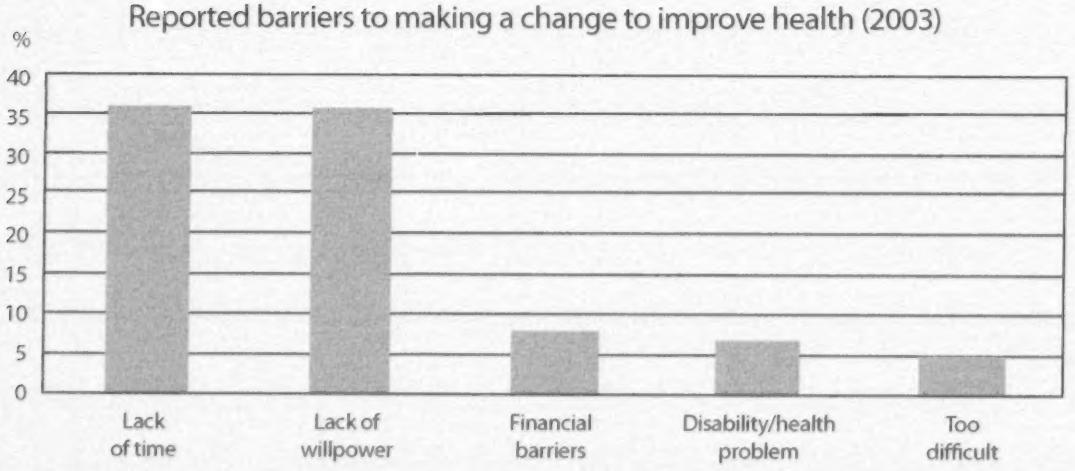
Health is something that can be affected on a personal level, by making changes to behaviour and lifestyle. Although not everybody wishes to make health-related changes, those who do may encounter factors that support these changes (such as the availability of services, or support from friends and family), or factors that act as barriers (such as a lack of sufficient infrastructure or economic resources). It is at this point that the influence of the determinants of health may be seen clearly.

In 2005, 64% of Yukoners reported having done something in the previous 12 months to improve their health, up from 57% in 2001.[16] Females were more likely than males to have made changes (69% vs. 58%), as were rural residents (69% vs. 61% of urban residents) and those with a higher level of education (70% of those with some post-secondary education vs. 57% of those with high school education or less).[16]



The single most important change made to improve health was an increase in exercise or participation in sports (49%). Other important changes were an improvement in eating habits, change in diet or taking vitamins (13%), losing weight (12%), and smoking reduction or cessation (11%).

Approximately 69% of the population reported that they should make additional changes to improve their health. However, not all respondents felt they would be able to make these changes. An estimated 38% of the population who felt a need for some change saw some barrier to making this needed improvement. The main barriers identified were a lack of time (36%), a lack of willpower (36%), a financial barrier (8%), a disability or health problem (7%), or the thought that the necessary changes would be too difficult to make (5%).[16] People from low income households were most likely to perceive a barrier to making a change (47%). Age was also a factor, with 41% of adults 35 and older perceiving some barrier, compared to 33% of those aged 12-34. And urban dwellers were more likely to perceive a barrier (41%) than rural dwellers (32%).


Reported barriers to making a change to improve health (2003)
%
40
35
30
25
20
15
10
5
0
Lack of time
Lack of willpower
Financial barriers
Disability/health problem
Too difficult

Part 3
Health Status

In this section, we explore a number of health indicators related to birth, death and disease. These are the types of measures that are most commonly collected and published to describe the health status of a population. They are also what we most often picture when we think about health. Most of us know someone among our family, friends or community who has had a serious or chronic health condition. Although illness is only one aspect of health and wellness, it is the one that most often brings us into contact with health care providers and heightens our awareness of the importance of good health in our daily lives.

A. Births and deaths

1. Birth rate

The birth rate is slightly higher for Yukon than for Canada as a whole. There were 11.8 births per 1,000 Yukon population in 2004, while the national crude birth rate was 10.5 births per 1,000 population in the same year.[25]

Birth rate per 1,000 people (2004) (in 2003 report)

Birth rate per 1,000 people	
Yukon	11.8
Canada	10.5

Data source: Statistics Canada. Live births, crude birth dare, age-specific and total fertility rates, Canada, provinces and territories, annual. CANSIM table 102-4505.

2. Low birth weight

Low birth weight (babies born weighing less than 2500 grams or 5.5 pounds) is a concern because it influences the survival and the later health and development of the child. Health risks for low birth-weight infants include activity limitation, bronchitis or asthma, frequent nose or throat infections and visual problems. Low birth weight babies are often born prematurely, and maternal factors such as illness, nutrition and smoking play a part.

The three-year average for low birth weight babies in Yukon was 4.7% of all live births in both 1997 and 2001. The proportion of low birth weight babies was slightly higher nationally, at 5.8% of live births in 1997 and 5.6% in 2001. However, the Yukon figures rely on very small numbers of births and may not reliably indicate a difference between Yukon and Canada.[26]

3. Infant mortality rate

Infant mortality, the death of a child under one year of age, is among the most frequently used indicators of population health status. Infant mortality is closely associated with pre-term and low birth weight births. It is very difficult to calculate reliable infant mortality rates for a small population like that of Yukon, since a single infant death can have a very large impact on the mortality rate. There are typically between one and three infant deaths per year in the territory, so even multiple-year averages should be interpreted with caution. The 10-year averaged infant mortality rates for 1995-2004 are presented below for Yukon and Canada.

Infant mortality rate by age group, average, 1995-2004

Age group	Canada	Yukon
Under 1 year of age at time of death	5.4	6.6
Neonatal (0 to 27 days at time of death)	3.9	4.5
Post-neonatal (1 to 11 months at time of death)	1.6	2.1

Source: Statistics Canada, CANSIM Table 102-0507

4. Life expectancy

Life expectancy at birth is one of the oldest and most widely used measures of the health of a population. It is defined as the number of years a person can expect to live, on average. In Canada and other higher income countries, life expectancy has climbed slowly and steadily over the past several decades. However, these increases in life expectancy are not homogeneous throughout the population. There are differences by location and by gender, and determinants of health such as income and education are closely tied to life expectancy for different subsets of the population.

In the Yukon, life expectancy has risen from 73.4 years in 1994 to 75.7 years in 2006. Life expectancy is higher among females than males, with life expectancy at birth placed at 77.7 for females and 74.0 for males for the year 2006. Life expectancy is shorter for the Aboriginal population of the territory; Aboriginal males had an average of 8.8 years less life expectancy than their non-Aboriginal counterparts and, on average, Aboriginal females' life expectancy was 7.3 years less than non-Aboriginal females. However, the gap has been narrowing. Between 1994 and 2006, Aboriginal males had a life expectancy increase of 4.6 years (7.3%) compared with 2.5 years (3.5%) for non-Aboriginal males. There is a similar pattern among females—Aboriginal women gained 3.2 years (4.5%) in life expectancy in this period, compared with 1.8 years (2.3%) among non-Aboriginal women.[27]

5. Standardized mortality rate

A common indicator used to illustrate differences between regions is the age-standardized mortality rate. This measure allows us to compare causes of death in populations that have different age structures. The numbers of deaths are standardized to a specific population size (100,000 people) and age structure (in this case, the age structure of all of Canada). While age standardized rates do not give the true numbers of deaths in each region, they enable us to compare differences in death rates between different regions and over time.

On the whole, Yukon has a higher age-standardized mortality rate than Canada does nationally, and males have a higher mortality rate than females. For the 10-year period of 1992-2001, Yukon males had an age-standardized mortality rate of 973.15 per 100,000 population, and Canadian males had a slightly lower mortality rate of 838.57. For the same period, Yukon females had an age-standardized mortality rate of 636.71, as compared with 519.38 for Canadian females.[28]

Another way to consider mortality is to break it down by cause of death. Age-standardized mortality rates by selected causes of death are presented below for Yukon and Canada for the 5-year period from 2000-2004. While there are some regional differences, most notable is the high rate of lung cancer mortality for Yukon males when compared to the national figures and to the rate for Yukon females.

Age-Standardized Mortality Rate per 100,000 Population, 2000-2004

Selected Cause of Death, Overall	Canada			Yukon		
	Total	Male	Female	Total	Male	Female
Colorectal cancer	18.7	23.5	15.0	20.3	20.5	19.6
Lung cancer	47.2	63.3	35.1	74.6	104.5	43.3
Acute myocardial infarction (AMI)	49.9	70.0	34.3	39.6	50.4	27.2
Cerebrovascular diseases	38.9	42.8	35.9	47.9	51.7	46.0
All stroke	32.7	35.5	30.3	41.0	44.8	39.1
Prostate cancer (males only)	25.2	25.2	–	19.6	19.6	–
Breast cancer (females only)	24.3	–	24.3	27.3	–	27.3

Source: Statistics Canada, CANSIM Table 102-0126 as of October 9, 2008.

The Public Health Agency of Canada provides age-standardized mortality rates for additional causes of death such as motor vehicle accidents, suicides and other injuries, as shown in the table below. While these rates are for a different time period than those given above, they do explain some of the differences between death rates in Yukon and Canada and are therefore noteworthy. Of particular note is the elevated rate of mortality associated with motor vehicle accidents and other injuries or poisoning for Yukon men and women, as compared to all Canadians. In addition, the suicide mortality rate is notably higher for Yukon men than for all Canadian men.

Age-standardized mortality rates per 100,000 population, 1992-2001

	Canada		Yukon	
Cause of Death	Male	Female	Male	Female
Diabetes	21.05	14.92	10.85	18.81
Alzheimer's Disease	13.50	14.98	--	--
Pneumonia	26.63	16.77	29.60	16.52
Chronic Obstructive Lung Disease	42.26	17.70	56.46	19.73
Asthma	1.26	1.35	--	--
Motor Vehicle Accidents	14.77	6.20	39.65	17.37
Suicide	20.31	5.24	37.98	6.04
Other Injury or Poisoning	28.47	13.64	81.75	27.54

Source: Public Health Agency of Canada

6. Potential years of life lost

Potential years of life lost (PYLL) is a useful measure of population health because it reflects mortality among younger age groups. PYLL is the number of years of life 'lost' when a person dies *prematurely* before age 75 from any cause. For example, a person dying at age 25 has theoretically lost 50 years of life, and a person dying at age 60 has lost 15 years of life.

Though the mortality rate for Yukoners was lower than the national rate in 2001, the PYLL rate per 100,000 population was higher for Yukon. While the three-year averaged PYLL rate was 6,513.5 years per 100,000 population for Yukon, it was 5,101.5 for Canada in 2001. The PYLL rate was

considerably higher for males than females in both Yukon and Canada. For Yukon females, the PYLL rate was 3,961.2, compared with 8,970.6 for Yukon males per 100,000 population. Nationally, the PYLL rate for females was 3,862.8 compared with 6,328.5 for males.[29] These differences reflect a higher rate of premature death in the territory, particularly for males.

B. Physical health

1. Self-rated health

Self-reported health is an excellent measure of the wellness of the population. It is one of the strongest, most consistent predictors of subsequent illness and premature death. There is also evidence that self-ratings of health are important predictors of health care utilization and hospitalization and recovery from illness.

In the 2007 the Canadian Community Health Survey, over 50% of Yukoners (56.5%) reported their health as being *excellent* or *very good*.[15] As with many other measures of health and disease, self-rated health is not evenly distributed throughout the population. Age plays a role, with seniors less likely than younger individuals to report having excellent or very good health; an estimated 33% of Yukon seniors and 39% of all Canadian seniors were in this category.

Socio-economic status was also closely related with self-rated health, and a report of *poor* or *fair* health was much more likely among people with a lower household income bracket (23% vs. 5% of Yukoners in high-income households) or less education (15% of Yukoners with a high school education compared with 8% of Yukoners who had some post-secondary education).[16]

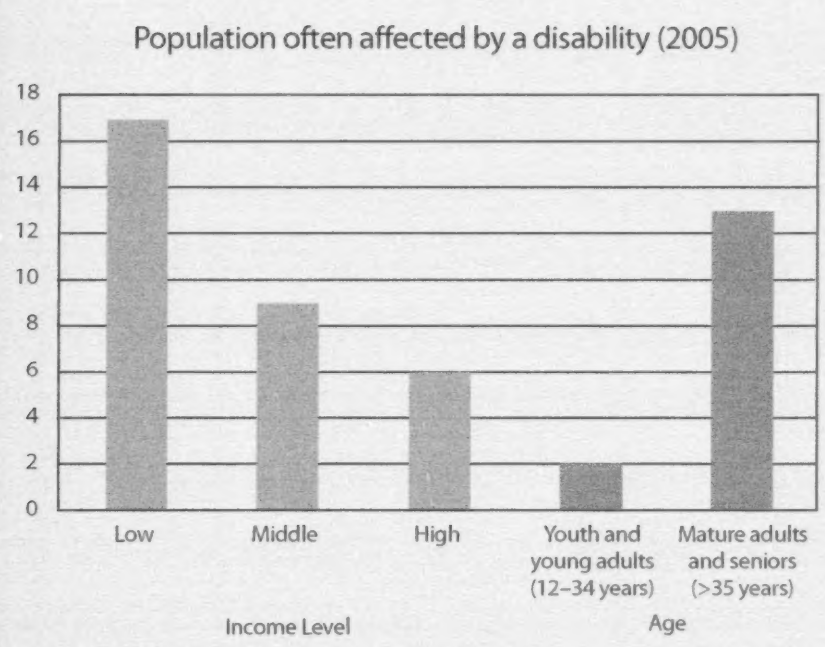
2. Change in health

Over time, do Yukoners think their health is getting better or worse? The Canadian Community Health Survey (2005) included a question about self-perceived health compared to the respondent's health one year previously. While approximately 65% of Yukoners felt their health had remained unchanged over the past year, 24% thought their health was somewhat or much better, and 11% thought it was somewhat or much worse.

Proportionally more adults 35 years of age or older felt their health had worsened (13%), compared to youths and young adults (7%). Those in lower income households were particularly vulnerable to suffer from declining health (24%), compared with 7% of middle income households and 10% in upper-income households. And those with less education were slightly more likely to report a decline in health (16% vs. 10%). These trends are similar to those seen at the national level. There was very little difference between urban and rural residents, either for Yukon residents or for Canadians as a whole.[16]

3. Disability

While the self-reported physical health of most Yukoners is very good, approximately a quarter of the population has difficulty with some activities, such as hearing, seeing, communicating, walking, climbing stairs, bending, learning and so forth. The 2005 Canadian Community Health Survey found that an estimated 16% of Yukoners 'sometimes' have difficulties with these sorts of activities, while an additional 9% of individuals 'often' have such difficulties. These estimates are quite similar to the national figures. The primary reasons stated for these difficulties were disease or illness (30%), accident (25%), work conditions (12%) and aging (12%).[16]



Not surprisingly, age is strongly associated with disability. As many disabilities are long-lasting or permanent, the disability prevalence rate is higher in older populations. While an estimated 86% of Yukon youth and young adults (ages 12-34) 'never' have difficulty with activities, this proportion drops to 69% of mature adults and seniors (ages 35 and older). And while only 2% of youths and young adults are 'often' impacted by a reduction in activities, 13% of mature adults and seniors fall into this category.

Another factor associated with disability is household income. Yukoners from lower income homes (17%) are most likely to 'often' be affected by a reduction in activity, compared with those from mid-income households (9%) and high-income households (6%). There are likely multiple reasons for this association, including the overall poorer health status of lower-income Yukoners and reduced work opportunities for those who suffer from physical or mental disabilities.

4. Chronic diseases

The presence of a chronic condition affects not only how well a person feels, but also how able he or she is to carry out activities of daily living and to live independently. According to population estimates from the 2005 Canadian Community Health Survey, 65% of Yukoners (69% of all Canadians) have been diagnosed with one or more chronic conditions. Of those Yukoners who report a chronic condition, approximately 27% have allergies (other than food allergies), 20% report back problems (excluding fibromyalgia & arthritis) and 14% report having arthritis or rheumatism. Other common chronic conditions included food allergies (12%), high blood pressure (11%), and migraine headaches (10%). All other chronic conditions were found in less than 10% of the population; for instance, the estimated asthma prevalence rate was 8%, and the diabetes rate was 4%.

The prevalence of most chronic conditions increases with age. Chronic conditions affected an estimated 43% of Yukon youth (ages 12-17), 53% of young adults (ages 18-34), 71% of mature adults (ages 35-64), and 93% of seniors. A similar trend is seen nationally. Diagnosed chronic conditions were more common in Yukon females (73%) than males (57%), an observation that is at least partially due to women's more frequent contact with physicians.

Yukon residents from low-income households were particularly likely to be diagnosed with chronic conditions (82%). However, there were no differences in the chronic condition prevalence rates by level of education.[16]

5. Communicable diseases

Communicable diseases are illnesses that can be spread from one person to another. Approximately 35 important communicable diseases, such as HIV, hepatitis, meningitis, measles and tuberculosis, are monitored on a territorial, national and international level. This is done to help track and prevent the further spread of these diseases.

The information presented in this section reflects current priorities in communicable disease reporting. Reportable diseases that are not normally present in Yukon and have generally been acquired abroad (such as malaria and leprosy) have not been included.

It is important to note that the data includes only reported cases of disease. In some instances, there may be under-reporting as happens when an infected person does not seek treatment, the infected person was a silent carrier (had the disease but no symptoms were present), or a specific diagnosis was not made or reported. It is equally important to recognize that more aggressive surveillance and testing can result in increased reported rates even when the actual incidence of the disease remains unchanged.

a. Diseases preventable by routine vaccination

Yukon's child vaccination schedule is built upon the recommendations of the National Advisory Committee on Immunization (NACI) followed with review by the Territorial Advisory Committee on Immunization (TACI) including the Medical Officer of Health. Routine vaccination is offered to protect infants and children against diphtheria, pertussis, tetanus, measles, mumps, rubella, hepatitis B, poliomyelitis, and *Haemophilus influenzae* type B. Recent infant vaccination additions include meningococcal type C (since 2005), pneumococcal vaccination (covering seven strains since 2005, with further expansion to 10 strains in 2009 and subsequently to 13 strains by 2010), and varicella, also known as chicken pox (since 2007).

Pertussis (whooping cough), a highly contagious bacterial infection of the respiratory tract, affects young children most severely. Historically, outbreaks of pertussis have cycled through Yukon every four to five years. In 2004, a new pertussis vaccine became available for adolescents and adults in Canada. Yukon Health and Social Services implemented a Grade 9 vaccine program along with a three-year catch-up program for students in grades 10 through 12. Sporadic cases continue to occur in the adult population and in the non-immunized adolescent population. As the high school population ages, it is expected that eventually there will be fewer cases.

The last case of measles diagnosed in Yukon was in 1996, and the last confirmed mumps case appeared in 1998. We have not seen rubella in Yukon since 1997. A second dose of the measles, mumps and rubella vaccine was introduced in 1996 as part of a global measles eradication plan as well as an effort to boost population immunity to mumps and rubella. In 2006 this second dose was moved to an 18-month booster dose. In addition, all pregnant women are screened for rubella, and if not immune, they are offered the vaccine post-delivery. Measles, mumps, and rubella all still occur among non-immunized people both in Canada around the world; therefore, continued high immunization rates here are essential.

Acute flaccid paralysis as a complication of polio has never been diagnosed in Yukon.[30]

Invasive *Haemophilus Influenzae* type B is rarely seen in Yukon today since the implementation of the infant HIB vaccine in the late 1980s. There were no cases diagnosed in the territory between 1994 and 2006.

Disease preventable by routine vaccination, reported rate per 100,000 population, 2000 to 2006 (Yukon)

	2000	2001	2002	2003	2004	2005	2006
Hepatitis B	6.6	3.3	0	0	6.4	0	0
Pertussis	476.6	0	262.1	81.8	3.2	0	12.7
Measles	0	0	0	0	0	0	0
Mumps	0	0	0	0	0	0	0
Rubella	0	0	0	0	0	0	0
Acute flaccid paralysis	0	0	0	0	0	0	0
Haemophilus Influenzae B	0	0	0	0	0	0	0

Yukon Communicable Disease Control, Government of Yukon

b. Diseases transmitted by direct contact and respiratory routes

No cases of Group B streptococcal disease in newborns, legionellosis, or hantavirus pulmonary syndrome have been reported in Yukon since these were added to the list of reportable diseases in 2000. There were two confirmed cases of invasive Group A streptococcal disease (including necrotizing fasciitis) in total between 2002 and 2008. This disease occurs when the bacteria invade a usually sterile location, e.g. blood, joint, brain, spinal cord or deep tissues within the body. Early and aggressive treatment is necessary to ensure a positive outcome. There is no vaccine available to prevent this disease.

There have been six or seven cases of invasive pneumococcal disease annually between 2002 and 2006. Like invasive group A streptococcal disease, this disease occurs when bacteria invade a usually sterile site, e.g. blood, spinal cord, etc. Several virulent strains of *Pneumococcus* bacteria exist. The most common diseases caused by this bacteria in Yukon are pneumonia and sepsis (blood poisoning), both of which are treated with antibiotics. Infants are routinely offered vaccinations containing several strains of this bacteria. Adults 65 years of age and older and those with certain medical conditions are routinely offered a vaccine containing 23 strains of this bacteria.

There have been three or four confirmed cases of tuberculosis (TB) annually in the territory over the past three years. However, since early 2008 we have seen higher than usual numbers of TB. This outbreak triggered a special epidemiological investigation with assistance from the Public Health Agency of Canada. Social factors such as housing conditions and alcohol abuse were found to be associated with increased risk for active TB, as has been shown elsewhere around the globe. Locally, the outbreak has resulted in several initiatives, such as campaigns to increase health provider awareness of the symptoms and signs of TB, increased TB practitioner staffing at Yukon Communicable Disease Control, and changes in investigation of TB cases to focus on high-risk contacts for developing tuberculosis.

Over the past five years, Yukon has had some laboratory confirmed cases of influenza although there have not been any influenza epidemics. The very young, those over 65 years of age and those with medical conditions that put them at greater risk of experiencing severe complications with influenza are encouraged to get annual vaccinations, which are offered to all Yukoners free of charge.

Legionellosis has not been reported to date in Yukon. Outbreaks of this disease have occurred in long-term care facilities in other jurisdictions. Therefore it remains a consideration for local outbreak investigations.

Invasive meningococcal disease occurs rarely in Yukon; the last case was diagnosed in 1998. However, it has occurred in outbreaks in other jurisdictions in recent years. The implementation of meningococcal conjugate C vaccination programs for infants and adolescents will offer more protection for Yukon youth.

Hantavirus pulmonary syndrome has not been diagnosed in Yukon to date. However, education material remains available as the infection is associated with exposure to deer mice, which are found in many parts of Yukon.[31]

Diseases transmitted by direct contact and respiratory routes, rate per 100,000 population, 2000 to 2006 (Yukon)

	2000	2001	2002	2003	2004	2005	2006
Invasive Group A streptococcal disease	0	13.3	3.3	0	0	6.4	0
Invasive pneumococcal disease	9.9	3.3	6.6	22.9	19.9	22.4	22.1
Influenza (laboratory confirmed)	75.6	92.9	33.2	215.7	39.8	73.7	202.5
Tuberculosis	9.9	0	0	3.3	13.3	9.6	9.5

Yukon Communicable Disease Control, Government of Yukon

c. Enteric, food-borne and water-borne diseases

Enteric infections are transmitted principally through the consumption of contaminated food or beverages. Good sanitation practices in food storage, handling, preparation and serving are essential for the prevention of infection. Routine water testing and purification are used to safeguard public drinking water.

While there are occasional occurrences of enteric, food and water-borne infections in the territory, public drinking water has not been implicated with any of these enteric illnesses. In fact, a number of cases have been directly associated with out-of-territory travel or the drinking of untreated water.[31]

Enteric, food and waterborne disease, rate per 100,000 population, 2000 to 2006 (Yukon)

	2000	2001	2002	2003	2004	2005	2006
Camplyobacterosis	6.6	6.6	9.95	9.8	16	9.6	19
Cryptoporidiosis	16.4	10	0	3.3	0	0	3.2
Giardiasis	62.5	46.5	49.8	19.6	23.2	38.4	28.5
Hepatitis A	0	3.3	3.3	0	0	0	3.2
Salmonellosis	6.6	0	23.2	9.8	6.4	9.6	12.7
Shigellosis	0	3.3	10	0	0	3.2	0
Verotoxigenic E. coli	6.5	0	0	0	0	3.2	0

Yukon Communicable Disease Control, Government of Yukon

d. Sexually transmitted and blood-borne infections

The rate of sexually transmitted infections (STIs) tends to be relatively high in the north. In 2005, approximately 14% of Yukoners said they had been diagnosed with an STI at some point in their lives, as compared to just 7% of Canadians. Yukon women (14%) were slightly more likely than men (13%) to say they had been diagnosed with an STI, as were urban Yukoners (18% as compared to 6% of rural Yukoners).[16] Ongoing sexual health education, the promotion of safer sex practices, and accessible testing and treatment are key measures in the prevention of sexually transmitted infections.

Chlamydia is the most widespread sexually transmitted infection in the territory. Chlamydia rates have consistently been higher in Yukon than in southern Canadian jurisdictions, and are exceeded only by those in Nunavut and the Northwest Territories. In 2006, the rate of Chlamydia infection was 556.4 Chlamydia infections per 100,000 population. This was lower than the 2005 rate of 666.1 per 100,000 people; however, it is still about 20% higher than disease incidence in the early 2000's following a Chlamydia screening campaign in the late 1990s. The age group most affected are 15 to 19 year olds, closely followed by 20 to 24 year olds. Women are about three times more likely than men to be identified as being infected. However, women are more likely to get tested than men, as they access health care for birth control, pap screens, and other sexual health care services. There is good access to screening services in Yukon; individuals can get tested at local health facilities, the offices of family physicians, or at the Yukon Communicable Disease Control office in Whitehorse. At the same time, a strategy to better understand and address the causes of Yukon's high Chlamydia rate is currently being developed.

There are periodic episodes of gonorrhea in the territory. The majority of the cases are in the 20 to 29 year old age group. In 2005, the majority of identified infected individuals were male, whereas in 2006 more females were diagnosed than males.

The number of people diagnosed with HIV each year is low, and to date has primarily been in the older age groups. However, it is quite possible that the burden of HIV is higher than revealed by current testing practices. Expanding screening opportunities, and even incorporating HIV screening into routine medical and prenatal exams might help to pick up otherwise undiagnosed cases. With the increasing availability and variety of anti-retroviral medications, early diagnosis and treatment is all the more important to reduce both the spread and the severity of this disease.

Hepatitis C is a viral infection of the liver transmitted through contact with contaminated blood. Less commonly, it can be spread by sexual contact with an infected person, or from an infected mother to her infant. Many cases of hepatitis C in Canada have not yet been diagnosed, so the actual prevalence of infections is likely greater than reported. The hepatitis C incidence rates reported here do not necessarily reflect new infections, but are, for the most part, chronic infections acquired many years ago but newly detected. The 'look back, trace back' programs were a concerted effort to identify persons who may have received blood products infected by hepatitis C. These programs encouraged those at risk to be screened, and were directly responsible for the large number of cases diagnosed in the late 1990s and early 2000s. [31]

Laboratory-confirmed sexually transmitted and blood borne infections, incidence rate per 100,000 population, 2000 to 2006 (Yukon)

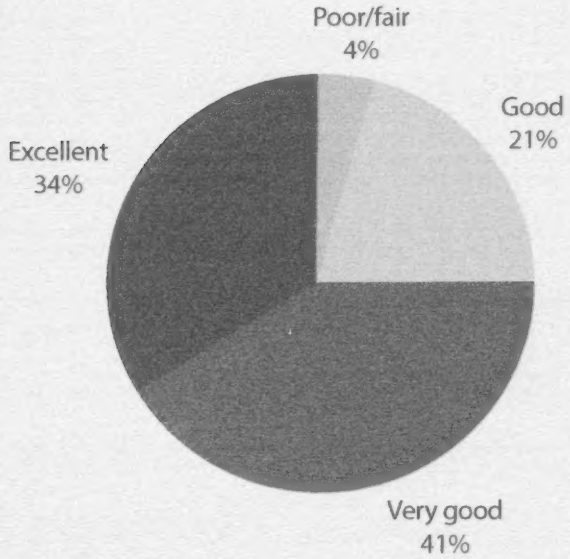
	2000	2001	2002	2003	2004	2005	2006
Chlamydia	477.4	438.1	467.9	588.7	638.5	666.1	556.4
Gonorrhea	16.3	10	36.5	9.8	136.1	73.2	36.2
Syphilis	36	73	19.9	16.4	3.2	3.5	0
HIV	16.4	13.3	10	13.3	13.3	3.48	6.58
Hepatitis C	154.5	146	142.7	140.7	70.5	129	125.1

Yukon Communicable Disease Control, Government of Yukon

C. Mental health

What does it mean to have good mental health? While every individual may have their own interpretation, good mental health is generally recognized as a state of well-being in which an individual is able to realize his or her potential, cope with the normal stresses of life, work productively, and contribute positively to the community in which they live. Mental well-being is influenced by personal resources (such as one's sense of optimism or coping skills) as well as the environment in which people live. Safe, supportive families and communities promote mental well-being, whereas violence, abuse, prejudice and neglect undermine mental health.

Self-reported mental health status (2005)

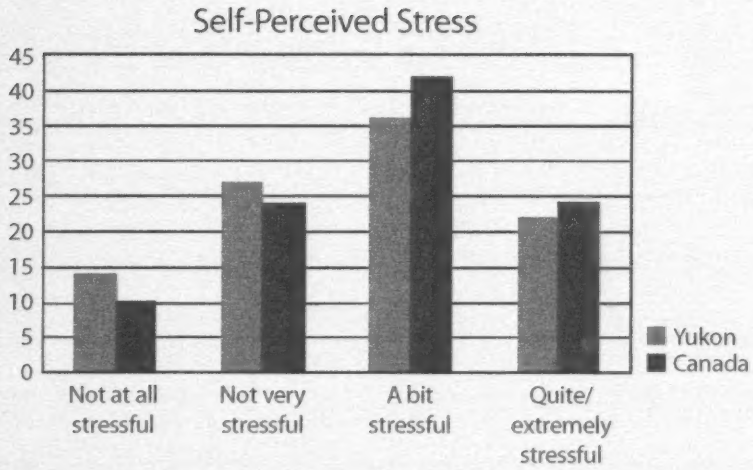


In 2005, the Canadian Community Health Survey measured a number of aspects of mental health among Yukoners and across Canada. While the results below show that the majority of Yukoners enjoy good mental health, the results also highlight the disparity that exists for people from lower-income households or with less education.

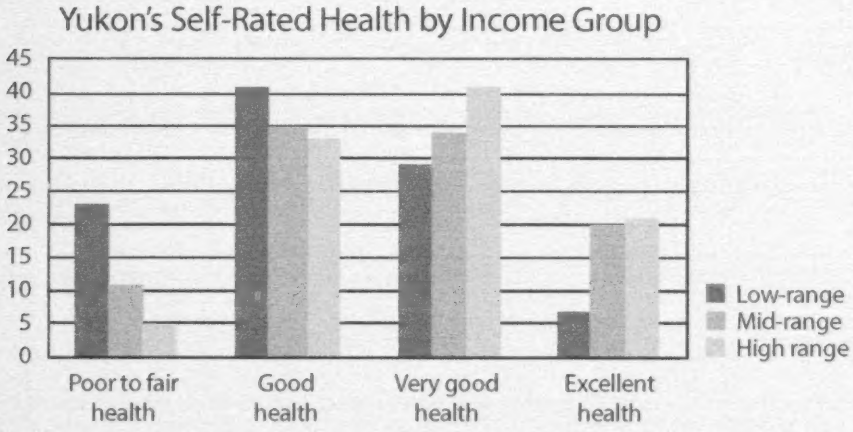
1. Self-rated mental health

The Canadian Community Health Surveys include a widely-used, simple self-reported measure of mental health. Each participant in the survey is asked to rate his or her mental health as poor, fair, good, very good, or excellent.

In the 2007 survey, most Yukoners and Canadians as a whole rated their mental health as 'very good' or 'excellent' (72%). There were no substantial differences between Yukoners and Canadians as a whole.[15]



Which Yukoners were more likely to report poorer mental health? There were no notable differences between men and women, nor were age or urban/ rural residence strong determinants of the mental health status of Yukoners. Income and education appeared to be most closely associated with mental health. People from low-income households were more likely than those from middle or upper-income households to say their mental health was 'good' rather than 'very good.' And those with less education were more likely to say their mental health was 'good,' and less likely to rate it as 'excellent'.[16]



2. Daily stress

Perception of stress is linked to mental health and wellbeing. High stress levels can be both a cause and an effect of poor mental health. In 2005 Yukoners in general rated their stress levels as slightly lower than Canadians as a whole. While an estimated 44% of Yukoners said their lives were 'not at all' or 'not very' stressful, only 36% of Canadians had similarly low stress levels. Similar proportions of the Yukon (22%) and Canadian (23%) populations said their lives were 'quite' or 'extremely' stressful. The remainder (34% of Yukoners and 42% of Canadians) had stress levels in the middle: 'a bit stressful'.

The amount of stress experienced by Yukoners was tied to several important social and demographic variables, There were no gender differences at the highest stress levels between men and women in the Yukon (22% of both men and women), and only minor differences in low

stress levels (41% of women and 47% of men). Younger Yukoners reported higher stress levels than seniors. While an estimated 44% of youth and young adults aged 15-34 and 42% of adults aged 35-64 reported low stress levels, the majority of seniors (65%) said their lives were 'not at all' or 'not very' stressful. Meanwhile, rural-dwelling Yukoners (53%) were more likely than urban residents (40%) to report low stress levels. Stress levels were slightly higher for those from high-income households than those in lower income brackets, and were marginally higher for those with some post-secondary education as compared to those with high school or less. Similar patterns are seen nationally.[16]

3. Work-related stress

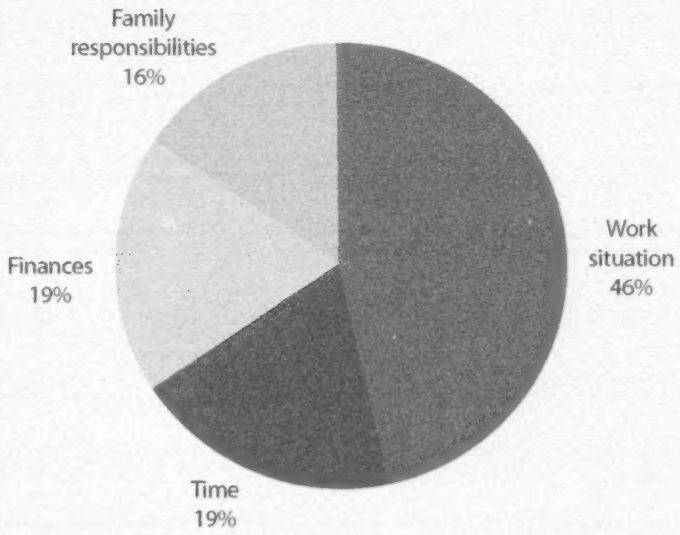
An estimated 32% of Yukoners and 29% of Canadians as a whole reported low levels of work-related stress. Meanwhile, 39% of Yukoners (41% of Canadians) described their work lives as 'a bit' stressful, and 28% of Yukoners (30% of Canadians) said their work lives were 'quite' or 'extremely' stressful.

While there were no gender differences at the national level, proportionately more Yukon men (38%) than women (26%) reported low work stress, but similar proportions of women (29%) and men (28%) described their work lives as 'quite' or 'extremely' stressful. Older Yukoners reported higher work-related stress levels than their younger counterparts. Meanwhile, 39% of rural Yukoners reported low work related stress, as compared with 29% of urban residents; there was a much narrower gap (3%) at the national level. A smaller proportion of Yukoners with some post-secondary education (30%) reported low work stress levels, as compared to those with a high school education or less (49%).[16]

4. Sources of stress

The primary sources of stress for Yukoners were related to the individuals' work situation or employment status (an estimated 27%), time (11%), financial situation (11%), and caring for others or family responsibilities (9%). There were clear differences between men and women. One's work situation was proportionally more important for men (33%) than women (21%), where as proportionally more women (13%) than men (5%) cited caring for others or family responsibilities as their main source of stress.[16]

Primary sources of stress (2005)



5. Ability to handle day-to-day demands and unexpected problems

Stress and overall mental well-being can affect our ability to handle day-to-day demands and unexpected problems. It can be difficult to cope on a daily basis or additional problems when life already feels stressful to begin with.

Most Yukoners (92%) reported a fairly strong ability to handle day-to-day demands. Only about 8% of Yukoners considered their ability to handle day-to-day demands to be 'poor' or 'fair.' Additionally, most Yukoners (87%) felt they could handle unexpected problems fairly well. However, the ability to handle these demands was affected by both income and education, as 23% of individuals from low-income households and 19% of those with a high school education or less, rated their ability to handle day-to-day demands as 'poor' or 'fair'.[16]

Overall, about 13% of the population rated their coping ability as only 'poor' or 'fair.' This included a greater proportion of females (16%) than males (11%), and those with less education (20%) and from low-income households (20%).[16]

6. Depression

Feeling downhearted or sad can be a normal response to a difficult life situation. Typically these feelings are short-lived. With depression, these feelings persist, additional symptoms emerge (e.g. sleep problems and feelings of hopelessness), and the ability to function on a day-to-day basis is impaired.

In 2003, an estimated 9% of Yukoners said they had felt sad, blue, or depressed for 2 weeks or longer in the previous 12 months. People in the low household income range were disproportionately represented (19%), and females (13%) more likely than males (6%) to report feeling sad, blue or depressed for two weeks or more.[18]

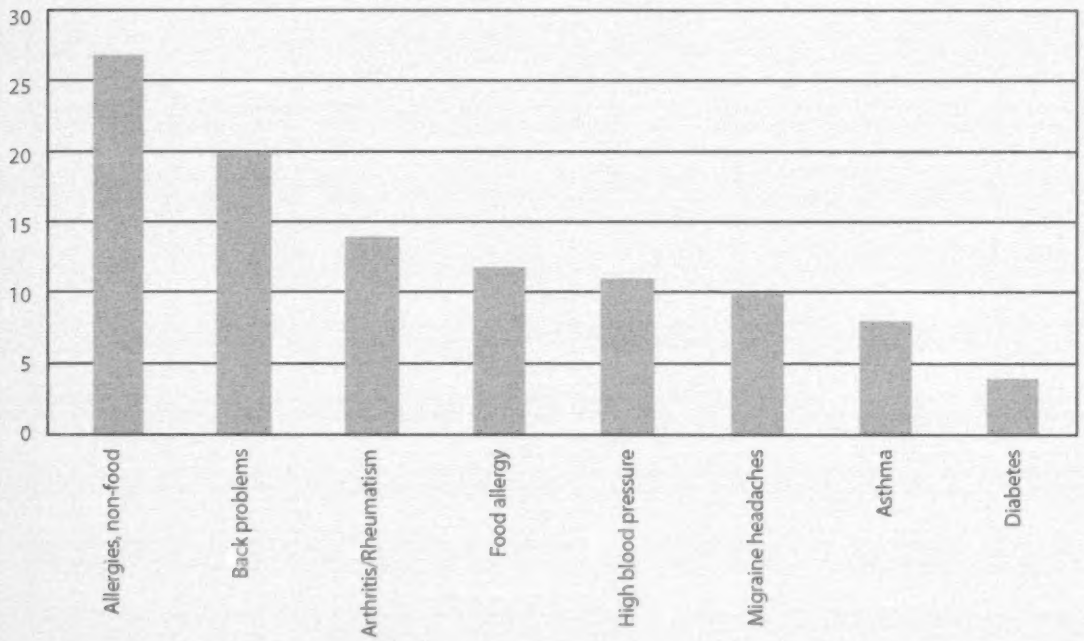
Part 4
Health system performance

As we have seen in previous sections of this report, health and wellness depend on a wide range of factors that are shaped by individuals, communities, and government, and are affected by both social and environmental conditions. By working together to improve these conditions, we maximize health for all members of society. However, the health care system also plays an important role in preventing disease and treating patients who are ill. In this section, we review several components of health system performance that pertain to health care availability and utilization.

1. Health promotion initiatives

An effective health care system emphasizes health promotion, in order to reduce the burden of chronic and acute illnesses on the population. Yukon's Health Promotion Unit provides and supports evidence-based, targeted health promotion and illness prevention programs and activities that increase public awareness, support healthier decision-making and lifestyles, promote professional development and collaboration among allied health professionals, and create supportive environments. For the past several years, Health Promotion Unit initiatives have focused on school health, healthy eating, sexual health, and reducing rates of tobacco use in the territory. A number of these successful initiatives are described in this section.

Chronic health conditions (2005)



- Because healthy students are better learners and positive learning outcomes relate strongly to positive health outcomes, there is much to be gained when the health and education sectors work together. Yukon schools are an important setting for health promotion activities. In 2006, the Yukon School Health Advisory Committee (YSHAC) was formed with participation from the Department of Health and Social Services, Department of Education, and non-governmental organizations. In September 2008 YSHAC hosted the Northern Health and Learning Symposium with funding from the Health and Learning Knowledge Centre of the Canadian Council on Learning. The symposium was a pan-Territorial event that focused on the areas of health and learning important to all northern residents. School-based Health Promotion Unit activities also included classroom presentations on healthy eating, healthy sexuality, tobacco-free living and media awareness; and on connecting Yukon teachers with health promotion resources. *Drop the Pop*, a school-based program to promote healthier drink choices, ran for a third consecutive year in the spring of 2008 in response to positive feedback and high participation rates in previous years.
- In 2007-08, safer sex initiatives included the YK-STYLE sexual health information and referral line, which was promoted through print and radio ads, with separate advertising campaigns for young and older adults. Seasonally relevant themed condoms, with messaging promoting healthy decision-making and behaviour, were distributed in conjunction several holidays and celebrations throughout the year. A campaign informing youth that Yukon Communicable Disease Control (YCDC) was an option for getting tested for sexually transmitted diseases was also launched in June 2009. Three new/updated publications were also created: An updated version of *Questions and Answers on Sexual Health* and a birth control methods book were distributed to Community Health Centres, YCDC, school counsellors and NGO's that work with youth. A youth sexual health book was also developed for future distribution to grade 7 and 8 students.
- Tobacco reduction initiatives included the continuation of the QuitPack program to help young smokers become and remain smoke-free, and an education and awareness campaign aimed at smokers encouraging them to take steps to protect loved ones from second-hand smoke. This was primarily a rural Yukon campaign utilizing direct mail, community posters, and community champions. In schools, the pan-territorial Smoke Screening program ran for the 6th year in the winter and spring of 2009. The program highlighted 12 anti-tobacco advertisements from around the world and screened them with tobacco reduction information to students in schools across the North. In 2008-09, Health Promotion Unit staff also played a key role in consulting with Yukon communities in anticipation of the Smoke-free Places Act that came into force on May 15, 2008.

2. Health screening rates

Early diagnosis and treatment of health conditions can lead to improved health outcomes. Notable successes in reducing disease across Canada have resulted from the wide uptake of screening programs, most notably for cervical cancer, breast cancer in older women, and blood pressure. Other routine or diagnostic testing is offered in Yukon in the form of physical examinations by a physician, nurse-practitioner, nurse or other health professional, dental health care, and eye examinations.

Some health screening rates from the 2005 Canadian Community Health Survey are presented here, in order to paint a broad picture of how well the health system is providing Yukoners with these services.

a. Physical check-ups and blood pressure checks

Not everyone needs an annual check-up. The need for healthy people to see their physician varies by age, sex, underlying health conditions and the appropriate interval for screening procedures. In

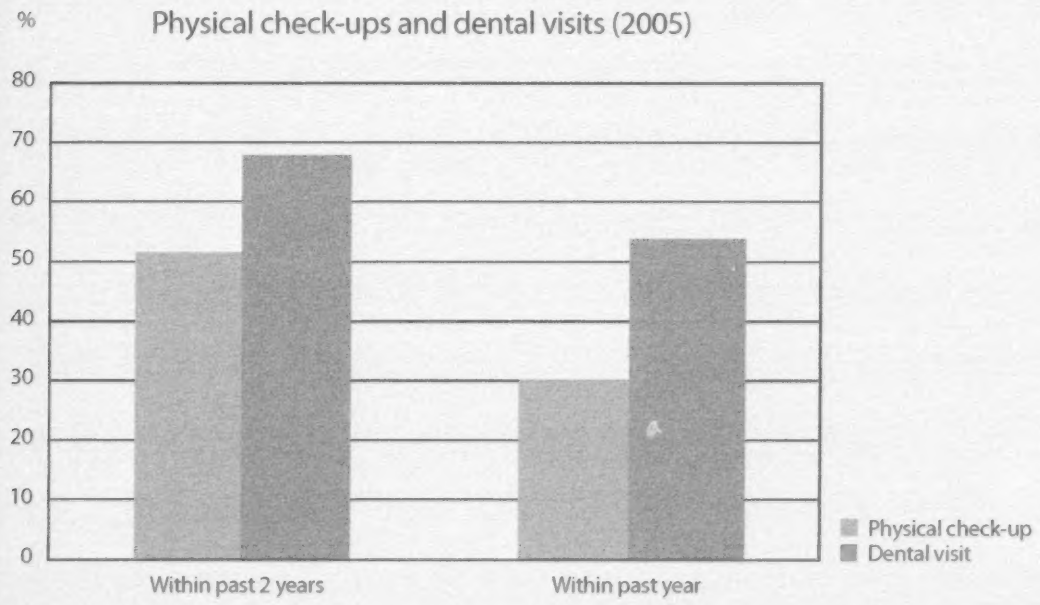
Yukon in 2005, over half the population (52%) reported having had a physical check-up within the past two years, while nearly a third of the population (30%) reported having a check-up within the past year. Despite periodic shortages of family physicians, this relatively high usage may indicate a relative ease of access to primary care in the territory, and a high degree of attention to preventive health services.

High blood pressure is easy and inexpensive to diagnose and treat, and its treatment greatly reduces the risk of heart disease and stroke. While blood pressure checks are often conducted as a part of a physical check-up, they can be performed in other contexts, such as at pharmacies, nursing stations and home care visits. In 2005, 69% of all Yukoners ages 25 or older reported having had their blood pressure taken within the past year, and nearly 95% reported having had a blood pressure check at some point in their lives.[16]

b. Dental visits

Dental health care is not covered under Yukon health insurance. However, many Yukoners have access to dental health care through the Yukon Children's Dental Program (for which all preschool and elementary school aged children are eligible), the Non-Insured Health Benefits program (Health Canada; includes eligible First Nations and Inuit people), the Pharmacare program for seniors (Government of Yukon), or insurance policies provided at their place of work. Others must pay for dental care out-of-pocket, or do without.

Nearly all Yukoners ages 12 and older (estimated at 99%) have had a dental visit at some point in their lives. However, in 2005, only 68% of the population had a dental visit within the past two years, and just over half of the population (about 54%) of the population had a dental visit in the past year.[16]



The Yukon Children's Dental Program, mentioned above, is an example of a territorial public health program that has been successful in bringing services to a broad range of Yukon residents. Public health initiatives are important not just for the medical services they provide, but also for helping ensure equitable access and fair outcomes for all residents, regardless of their economic status, location, or background.

The school-based program provides diagnostic, preventative and restorative (fillings) dental services to Yukon children in both urban and rural communities. Eligible students are all pre-school children, all home-schooled children, and students from kindergarten through Grade 8 in Whitehorse, and through Grade 12 in communities without a resident dentist.

Some statistics on the dental program's activities are provided below. About 3,000 to 3,200 children have been eligible in each of the past five years; between 73% and 94% of eligible children were enrolled and examined each year.

Yukon Children's Dental Program Activities, 2002-2007

	2002-03	2003-04	2004-05	2005-06	2006-07
Eligible children	3207	3206	3129	3016	2985
Enrolment and dental examinations	2349	2971	2460	2825	2402
X-ray treatments planned	3403	3677	3352	3533	3088
X-rays completed*	2923	2588	3958	4150	2719
Fluoride treatment planned	2795	2934	2520	2677	2315
Fluoride treatment completed*	2093	2628	2429	2640	2185
Pit and fissure sealants treatment planned	3514	3982	2898	3872	1810
Sealants completed*	2511	3096	3739	4082	2040

** In some years, the number of activities completed exceeds those planned; this is because services may be planned in one year and completed the next year, or because additional work was needed that was not anticipated in the initial examination.*

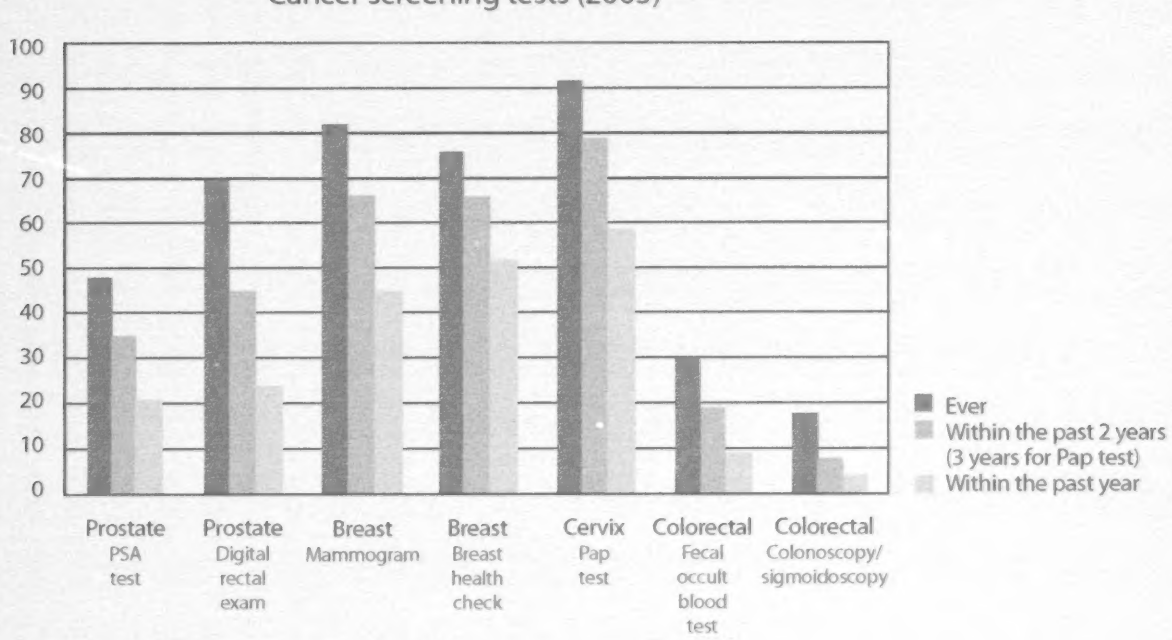
c. Eye exams

While eye health is an important part of one's overall physical health, eye exams are not covered under Yukon health insurance. Seniors receive full coverage under the Pharmacare program (Government of Yukon), and eligible First Nations and Inuit people receive coverage through the Non-Insured Health Benefits Program (Health Canada). Others have coverage through extended health insurance policies at their place of work, while some must pay for eye exams out-of-pocket.

An estimated 89% of Yukoners age 12 and older have had an eye exam at some point in their lives. Around 61% of the population had an eye exam within the past two years, and 39% within the past year.[16]

d. Cancer screening tests

Cancer screening tests are one of the reasons that we have seen improved cancer outcomes across Canada. While screening is not appropriate for all types of cancer or for all parts of the population, there are several cancer screening tests that are widely recommended, even for people who are not otherwise at elevated risk.



Pap smears

- The Pap smear screens for cancer of the cervix. The Canadian Cancer Society recommends that all sexually active females should have a Pap test every one to three years, depending on their medical history. The Pap smear is the main reason why cervical cancer, once a common and devastating cause of death in both younger and older women, is now a relatively rare cause of mortality.

  Most females aged 18 years and over in Yukon (approximately 92%) have had a Pap test at some time. This compares to 87% of women nationally. The majority of Yukon women (59%) have had a Pap test within the past year, and an estimated 79% of Yukon women 18 and over have had a Pap smear test within the past three years.[16]

  As a further strategy to combat cervical cancer and other conditions caused by the Human Papilloma Virus (HPV), in 2009 Yukon made HPV vaccination available for females between 9 and 26 years of age, and will soon be introducing a school-based HPV vaccination program.

Breast exams

- Breast health is monitored by means of breast exams conducted by a health professional, breast self-exams, and mammograms for those who are particularly high risk of developing breast cancer. Routine mammography screening is recommended for females 50 years of age and older in Yukon in order to identify new cases of breast cancer in the early stages, when treatment is relatively easy and successful. Routine mammography has not been shown to be effective in women under age 50, because of differences in the nature of the disease at younger ages.

In 2005, an estimated 82% of Yukon women aged 50 and older had had a mammogram at some point in their lives, as compared to 87% of Canadian women in the same age category. Around 66% of Yukon women and 64% of Canadian women 50 and older had a mammogram within the past 2 years, while 45% of Yukon women and 41% of Canadian women in the same age category had the procedure within the past year.[16]

Prostate cancer screening

- Prostate cancer is relatively common among older men. However, it is a relatively benign cancer, and most men who develop prostate cancer do not die of the disease. Prostate cancer screening is available through digital rectal exams and PSA blood tests.
  An estimated 48% of Yukon males age 50 years and older have had a PSA test at some time. Approximately 35% of Yukon men in this age group have been tested in the past two years, while around 21% were tested within the past year. Meanwhile, an estimated 70% of Yukon males age 50 and over have had a digital rectal exam at some point in their lives. Around 45% of Yukon males in this age bracket had a digital rectal exam within the past two years, while about 24% had an exam within the past year. Comparable national data are not available.[16]

  The Canadian Cancer Society recommends that men 50 years of age or older, as well as others at high risk of prostate cancer, should consider having PSA tests. However, two large studies published in 2009 support a cautionary approach to prostate screening with PSA. Routine PSA tests for people who are not at high risk for prostate cancer are not helpful, and may be harmful, at a population level. Much of the decision to screen or not depends on how individuals perceive the risk of cancer, how they might cope with the knowledge of having cancer, and how they view the risk of complications arising from prostate surgery or other cancer treatments. At this point, men are recommended to discuss the pros and cons of prostate cancer screening with their doctors to decide what is right for them.

Colorectal cancer screening

- Screening for cancer of the colon or rectum has been found to reduce rates of death from the type of cancer when applied to a population.

  A small proportion of the Yukon population undertake colorectal cancer screening, which is usually targeted towards individuals who are particularly at risk of developing colorectal cancer due to genetic predisposition, and those who have some warning signs.

  In 2005, an estimated 30% of Yukoners age 50 and older had their stool checked for occult blood at some point in their lives (a fecal occult blood test/ FOBT). Around 19% of the population in this age bracket had the test within the past two years, and 9% within the past year.

  Meanwhile, approximately 18% of the Yukon population age 50 and older have had a colonoscopy or sigmoidoscopy at some point, with around 8% having one of these diagnostic procedures within the past two years, and 4% within the past year. Comparable national data are not available.[16]

  Several provinces have recently launched programs to screen their populations for colon cancer, and in Yukon such a program is under active consideration.

3. Ambulatory care sensitive conditions

Ambulatory care sensitive conditions are health crises that could be avoided by appropriate preventive or management care, yet which erupt and lead to hospitalization. The age-standardized hospitalization rate for ambulatory care sensitive conditions is considered to be a reasonable, though crude, proxy for access to appropriate primary health care. It is a relative measure, and is therefore most useful for making comparisons between regions.

Acute care hospitalization for ambulatory care sensitive conditions, per 100,000 population (2006) (not in 2003 report)

2003/2004	2004/2005
608	645

Data source: Canadian Institute for Health Information. 2006 Health Indicators.

The age-standardized rate (per 100,000 population) for inpatient acute care hospitalization for ambulatory care sensitive conditions for Yukon was 476 in 2007-08. This is somewhat higher than the national rate of 326 in this period, but was much lower than the rate seen in the other northern territories (733 in the NWT and 1,298 in Nunavut), and was most similar to the rates seen in the Atlantic provinces.[23]

4. Caesarean section rate

Caesarean section is traditionally used to facilitate complicated deliveries. Lack of access to Caesarean sections contributes to maternal and infant mortality rates in disadvantaged regions of the world. However, many higher-income countries have excessive rates of Caesarean section. This itself is associated with increased maternal morbidity and mortality, as well as higher health care costs.[30] In Canadian hospitals, lower rates of Caesarean section are viewed as indicators of better, more efficient and appropriate maternity care.

The Caesarean section rate for Yukon was approximately 27% for 2007-08. These rates are within range of the national rate, which was 27.7% in 2007-08.[32]

Cesarean section rate (2003/2004 and 2004/2005) (not in 2003 report)

	2003/2004 (%)	2004/2005 (%)
Yukon	24.3	27.1
Canada	24.8	n/a

Data source: Canadian Institute for Health Information. 2006 Health Indicators.

5. Local physicians and visiting specialists

Yukon has a large number of physicians who provide excellent care for the needs of the territory's diverse and highly dispersed population. In addition to general practitioners, Yukon boasts resident specialists who practice in the areas of general surgery, obstetrics and gynecology, pediatrics,

anesthesiology, and psychiatry. Yukon fares relatively well for primary care, which is perhaps the most important component of medical practice. In 2007, Yukon had 207 general or family physicians per 100,000 population, a figure that compared favourably with Canada's overall rate of 99 general or family physicians per 100,000. There were also 26 specialists per 100,000 population in the territory, compared with 94 per 100,000 nationwide.

These numbers should not lead to complacency in recruitment or to the assumption that there are too many family doctors in the territory. On the contrary, many Yukoners still complain of difficulty obtaining a regular family physician. Because we live in a relatively isolated area, with far fewer specialists to participate in patient care, family doctors are highly skilled and take on complex and wide-ranging areas of work that would in other parts of Canada constitute the work of specialists. Thus, numbers of patients seen per day tend to be substantially lower than in the South, requiring a relatively higher number of family physicians.

Locally-based medical services are complemented by visiting specialists who provide services not regularly available in Yukon. Visiting specialists provide services in the areas of ophthalmology, oncology, internal medicine, otolaryngology, neurology, rheumatology, dermatology, dental surgery, infectious disease, psychiatry, orthopedics, and psychiatry. Visiting specialist clinics are held between one and eight times per year depending on demand and the availability of specialists. Although there may be a waitlist to see visiting specialists for non-emergency services, medical emergencies that cannot be taken care of within the territory are covered by the medical travel program that allows the treatment of patients in other centres within Canada.

6. Hospital inflow/outflow ratios

Hospital inflow/outflow ratios measure the capacity of the medical system to treat the needs of the Yukon population from within the territory. They track how many surgeries are being performed for Yukoners in Yukon hospitals, compared with the number performed in BC or Alberta through the medical travel program.

A ratio of 1.00 means that all the Yukon patients who needed treatment were able to receive them within the territory. As the ratio drops below 1.00, it indicates that there was a relative outflow—that is, some patients left the region to receive services. The lower the ratio, the higher the outflow, and the higher the number of patients that received treatment elsewhere.

No bypass surgeries or hip replacements were performed in Yukon hospitals between 2003 and 2008; all of these surgeries took place outside the territory. However, with an increase in capacity at Whitehorse General Hospital, the knee replacement inflow/ outflow ratio for Yukon jumped from 0.11 in 2003/04 to 0.5 in 2004/05, and has remained relatively stable since. Most hysterectomies are performed locally.[23]

Hospital Inflow/ Outflow Ratios (Yukon)

	Overall	Bypass Surgery	Hip Replacement	Knee Replacement	Hysterectomy
2007/08	0.84	0.0	0.0	0.43	0.98
2006/07	0.88	0.0	0.0	0.50	0.95
2005/06	0.89	0.0	0.0	0.44	1.00
2004/05	0.89	0.0	0.0	0.50	0.95
2003/04	0.87	0.0	0.0	0.11	0.97

Source: Canadian Institute for Health Information. Health Indicators Reports 2005-2009.

References

1. Statistics Canada. Population and Dwelling Counts; Age and Sex: 2006 Census. 2006.
2. United Nations Population Division. World Population Prospects: The 2008 Revision. http://dataunorg/Dataaspx?d=PopDiv&f=variableID%3A14#PopDiv 2005.
3. Yukon Bureau of Statistics. Population report. 2006 December 2006.
4. Statistics Canada. Immigrant status and period of immigration: 2006 Census. 2006.
5. Yukon Bureau of Statistics. Aboriginal Data: 2001 Census. 2003 April 2003.
6. Statistics Canada. Census of Population. Statistics Canada catalogue no. 97-560-XCB2006007. 2006.
7. Yukon Bureau of Statistics. Education: 2001 Census. 2003 May 2003.
8. Canadian Council on Learning. Health Literacy in Canada: Initial results from the International Adult Literacy and Skills Survey 2007. Ottawa: 2007.
9. Statistics Canada. The Daily: Wednesday, November 9th, 2005. International Adult Literacy and Skills Survey, 2003. http://wwwstatcanca/Daily/English/051109/d110509ahtm Accessed July 6, 2007.
10. Central Intelligence Agency. The World Factbook. https://wwwciagov/library/publications/the-world-factbook/indexhtml Accessed Dec 31st, 2008.
11. Bank of Canada. Rates and Statistics: http://www.bankofcanada.ca/en/rates/inflation_calc.html.
12. Yukon Bureau of Statistics. Family and Household Income: 2001 Census. 2003 May 2003.
13. Statistics Canada. 2006 Census. Statistics Canada catalogue no. 97-563-XCB2006045. 2006.
14. Yukon Bureau of Statistics. Yukon Statistical Review—2007 Annual Report. 2007.
15. Statistics Canada. Canadian Community Health Surveys 2007. 2007.
16. Statistics Canada. Canadian Community Health Surveys, cycle 3.1. 2005. 2005.
17. Silver W. Crime Statistics in Canada, 2006. . Statistics Canada.Juristat: Canadian Centre for Justice Statistics. Catalogue n. 85-002-XIE, Vol. 27, No. 5.
18. Yukon Bureau of Statistics. Yukon Crime Statistics, 1995-2003 (long form). .
19. Statistics Canada. Measuring Violence Against Women: Statistical Trends 2006. Catalogue no 85-570-XIE. 2006.
20. Statistics Canada. Canadian Community Health Surveys, Cycle 2.1. 2003. 2003.
21. Yukon Health and Social Services, Yukon Bureau of Statistics. Healthy Living Survey, 2008. Government of Yukon. 2008.
22. Health and Social Services. 2003 Yukon Health Status Report. Government of Yukon. 2003;Data source: CCHS Cycle 1.1 (2001).
23. Canadian Institute for Health Information. 2009 Health Indicators. Ottawa: CIHI, 2009.
24. Ramage-Morin PL. Motor vehicle accident deaths, 1979 to 2004: Statistics Canada, 2008.

25. Statistics Canada. Live births, crude birth dare, age-specific and total fertility rates, Canada, provinces and territories, annual. CANSIM table 102-4505.

26. Statistics Canada. Low birth weight babies (less than 2,500 grams), by sex, three-year average, Canada, provinces, territories, health regions and peer groups, occasional. CANSIM table 102-4203.

27. Yukon Bureau of Statistics. Life Expectancy in the Yukon: Yukon Executive Council Office, 2006.

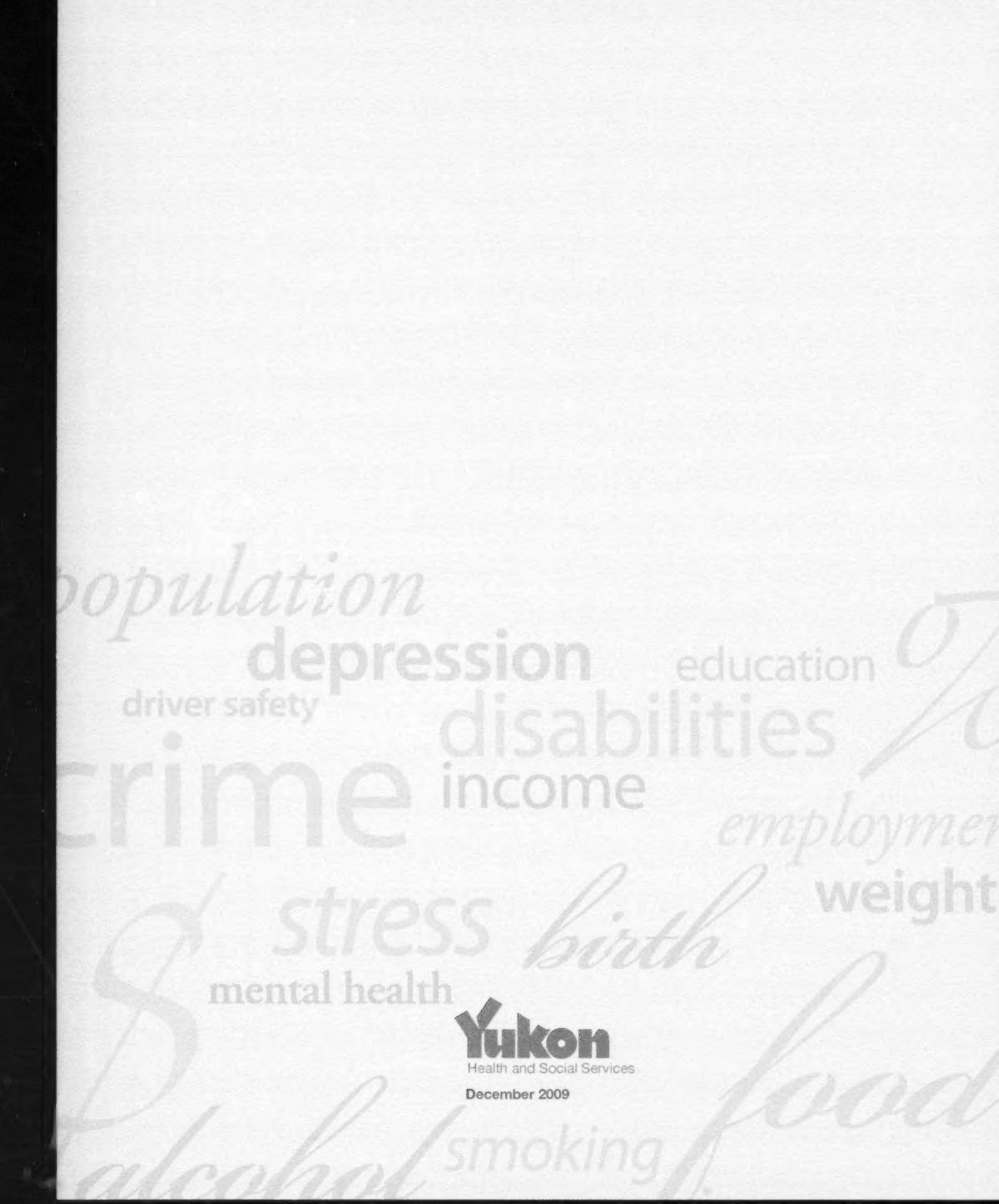
28. Public Health Agency of Canada. Major Chronic Disease Mortality by Province/ Territory. Age-standardized mortality rate per 100,000 (Canada 1991). . http://wwwphac-aspcgcca/surveillance_ehtml Accessed May 24, 2007. 1991.

29. Statistics Canada. Potential years of life lost, by selected causes of death and sex, three-year average, Canada, provinces, territories, health regions and peer groups, occasional. CANSIM table 102-0303.

30. Government of Yukon. Yukon Communicable Disease Control.

31. Yukon Communicable Disease Control. Government of Yukon.

32. Public Health Agency of Canada. Family-Centred Maternity and Newborn Care: National Guidelines. http://wwwphac-aspcgcca/dca-dea/pdfa-zenglishhtml#f06 Accessed June 19, 2007. 2002.



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